Index of Authors

AALTO, M., LAMPIAHO, K., PIKKARAINEN, J. & KULONEN, E. Amino acid metabolism of experimental granulation tissue *in vitro* 663–671

AKHTAR, M. *see* MERRY, A. H. 459–463

ALEXIU, A. *see* DE GASQUET, P. 633–635

ANTHONY, C. *see* DUNSTAN, P. M. 797–801

ARMSTRONG, D. T. *see* FLINT, A. P. F. 301–311, 313–321

ASHCROFT, S. J. H., WEERASINGHE, L. C. C. & RANDLE, P. J. Interrelationship of islet metabolism, adenosine triphosphate content and insulin release 223–231

AUSTOKER, J., COX, D. & MATHIAS, A. P. The synthesis of ribonucleic acid *in vivo* in the nuclei of rat brain fractionated by zonal centrifugation 813–819

BACALAO, J. *see* RIEBER, M. 641–644

BADDILEY, J. *see* HUGHES, A. H. 83–93

BALLOU, C. E. *see* NARUMI, K. 329–340

BARLOW, R. B. & DIXON, R. O. D. Choline acetyltransferase in the nettle *Urtica dioica* L. 15–18

BARNES, M. J., CONSTABLE, B. J., MORTON, L. F. & KODICEK, E. Bone collagen metabolism in vitamin D deficiency 113–115

BEN-AZIZ, A. *see* SINGH, R. K. 649–652

BESTER, A. J. & GEVERS, W. Cell-free protein synthesis in heart and skeletal muscles from polymyopathic hamsters 193–201

BESTER, A. J. & GEVERS, W. Evidence for defective transfer ribonucleic acid in polymyopathic hamsters and its inhibitory effect on protein synthesis 203–214

BLAU, K. *see* EDWARDS, D. J. 95–100

BOURNE, E. J., CLARKE, K., PRIDHAM, J. B. & ROWE, J. J. M. Further observations on the activation of lysosomal acid α-glucosidase by cortisone derivatives 435–438

BRINDLEY, D. N. The relationship between palmitoyl-coenzyme A synthetase activity and esterification of *sn*-glycerol 3-phosphate by the microsomal fraction of guinea-pig intestinal mucosa 707–715

BRINDLEY, D. N. *see also* SÁNCHEZ, M. 697–706

BRITTON, G. *see* SINGH, R. K. 649–652

BUCKLEY, B. M. & WILLIAMSON, D. H. Acetoacetate and brain lipogenesis: developmental pattern of acetoacetyl-coenzyme A synthetase in the soluble fraction of rat brain. 653–656

BURGE, M. L. E. *see* PROSPERO, T. D. 449–458

BUTLIN, J. D. *see* COX, G. B. 689–695

BYRNE, J. *see* QUIRK, S. J. 501–508

CAMERON, E. H. D. *see* MAYNARD, P. V. 283–291, 293–300

CAMPBELL, A. K. *see* SIDDLE, K. 765–773

CAREY, E. M. *see* STRONG, C. R. 121–123

CARTLEDGE, T. G. & LLOYD, D. Changes in enzyme activities and distributions during glucose de-repression and respiratory adaptation of anaerobically grown *Saccharomyces carlsbergensis* 609–621

CHAIN, E. B. & SENDER, P. M. Protein synthesis by perfused hearts from normal and insulin-deficient rats. Effect of insulin in the presence of glucose and after depletion of glucose, glucose 6-phosphate and glycogen 593–601

CHAPPELL, J. B. *see* CROMPTON, M. 27–34, 35–46

CLARKE, K. *see* BOURNE, E. J. 435–438

COLBY, J. & ZATMAN, L. J. Trimethylamine metabolism in obligate and facultative methylotrophs 101–112

CONSTABLE, B. J. *see* BARNES, M. J. 113–115

COOTE, J. G. & HASSALL, H. The control of the enzymes degrading histidine and related imidazolyl derivatives in *Pseudomonas testosteroni* 423–433

COOTE, J. G. & HASSALL, H. The degradation of L-histidine imidazolyl-L-lactate and imidazolylpropionate by *Pseudomonas testosteroni* 409–422

COX, D. *see* AUSTOKER, J. 813–819

COX, G. B., GIBSON, F., MCCANN, L. M., BUTLIN, J. D. & CRANE, F. L. Reconstitution of the energy-linked transhydrogenase activity in membranes from a mutant strain of *Escherichia coli* K12 lacking magnesium ion- or calcium ion-stimulated adenosine triphosphatase 689–695

CRANE, F. L. *see* COX, G. B. 689–695

CROMPTON, M. & CHAPPELL, J. B. Transport of glutamine and glutamate in kidney mitochondria in relation to glutamine deamidation 35–46

CROMPTON, M., MCGIVAN, J. D. & CHAPPELL, J. B. The intramitochondrial location of the glutaminase isoenzymes of pig kidney 27–34

CRYER, A., FOSTER, B., WING, D. R. & ROBINSON, D. S. The effect of cycloheximide on adipose-tissue clearing-factor lipase 833–836

DAWES, E. A. *see* MIDGLEY, M. 141–154; NG, F. M.-W. 129–140

DE GASQUET, P., PÉQUIGNOT, E., LEMONNIER, D. & ALEXIU, A. Adipose-tissue lipoprotein lipase activity and cellularity in the genetically obese Zucker rat (*fa/fa*) 633–635

DENTON, R. M. *see* HALESTRAP, A. P. 509–517

DIAUGUSTINE, R. P., SCHAEFER, J.-M. & FOUTS, J. R. Hepatic lipid droplets. Isolation, morphology and composition 323–327

DILS, R. *see* STRONG, C. R. 121–123

DIXON, R. O. D. *see* BARLOW, R. B. 15–18

DOLPHIN, P. J. *see* MERRY, A. H. 459–463

DUNSTAN, P. M. & ANTHONY, C. Microbial metabolism of C_1 and C_2 compounds. The role of acetate during growth of *Pseudomonas* AM1 on C_1 compounds, ethanol and β-hydroxybutyrate 797–801

EDWARDS, D. J. & BLAU, K. Phenethylamines in brain and liver of rats with experimentally induced phenylketonuria-like characteristics 95–100

FERENCI, T. & KORNBERG, H. L. The utilization of fructose by *Escherichia coli*. Properties of a mutant defective in fructose 1-phosphate kinase activity 341–347

FILLIOS, L. C. *see* FRANKEL, D. L. 645–648

FLACK, J. D. *see* MCDONALD-GIBSON, R. G. 117–120

FLINT, A. P. F. & ARMSTRONG, D. T. Activities of enzymes responsible for steroid biosynthesis and cholesterol ester metabolism in rabbit ovarian interstitial tissue and corpora lutea. A comparison of enzyme activities with flow rates 301–311

FLINT, A. P. F., GRINWICH, D. L. & ARMSTRONG, D. T. Control of ovarian cholesterol ester biosynthesis 313–321
FORSDYKE, D. R. *see* MILTHORPE, P. 803–812
FOSTER, B. *see* CRYER, A. 833–836
FOUTS, J. R. *see* DIAUGUSTINE, R. P. 323–327
FRANKEL, D. L., WELLS, H. & FILLIOS, L. C. Concentrations of asparagine in tissue of prepubertal rats after enzymic or dietary depletion of asparagine 645–648

GARLICK, P. J. *see* SENDER, P. M. 603–608
GERMINARIO, R. J., KAHLENBERG, A. & PINSKY, L. Biochemical studies on the sulphated glycosaminoglycan fraction of skin fibroblasts cultured from a patient with the Hurler syndrome 395–402
GERMINARIO, R. J., KAHLENBERG, A. & PINSKY, L. The disorder of hyaluronic acid metabolism in cultured skin fibroblasts derived from a patient with the Hurler syndrome 403–408
GESSNER, T., JACKNOWITZ, A. & VOLLMER, C. A. Studies of mammalian glucoside conjugation 249–258
GEVERS, W. *see* BESTER, A. J. 193–201, 203–214
GIBBONS, G. F. & MITROPOULOS, K. A. The effect of carbon monoxide on the nature of the accumulated 4,4-dimethyl sterol precursors of cholesterol during its biosynthesis from [2-^{14}C]mevalonic acid *in vitro* 439–448
GIBSON, F. *see* COX, G. B. 689–695
GIORGI, E. P., SHIRLEY, I. M., GRANT, J. K. & STEWART, J. C. Androgen dynamics *in vitro* in the human prostate gland. Effect of cyproterone and cyproterone acetate 465–474
GOLDSTONE, A. & KOENIG, H. Physicochemical modifications of lysosomal hydrolases during intracellular transport 267–282
GOLDSTONE, A., KOENIG, H., NAYYAR, R., HUGHES, C. & LU, C. Y. Isolation and characterization of a rough microsomal fraction from rat kidney that is enriched in lysosomal enzymes 259–266
GONZALEZ-MUJICA, F. & MATHIAS, A. P. Studies of nuclei separated by zonal centrifugation from liver of rats treated with thioacetamide 163–183
GOODMAN, DeW.S. *see* SMITH, J. E. 821–827
GOODWIN, T. W. *see* SINGH, R. K. 649–652
GRANT, J. K. *see* GIORGI, E. P. 465–474
GREWAAL, D. S. & QUASTEL, J. H. Control of synthesis and release of radioactive acetylcholine in brain slices from the rat. Effects of neurotropic drugs 1–14
GRINWICH, D. L. *see* FLINT, A. P. F. 313–321
GRUNNET, N. *see* KONDRUP, J. 373–379
GUSTINE, D. L. & ZIMMERMAN, E. F. Developmental changes in microheterogeneity of foetal plasma glycoproteins of mice 541–551

HALESTRAP, A. P. & DENTON, R. M. Insulin and the regulation of adipose tissue acetyl-coenzyme A carboxylase 509–517
HANCOCK, I. C. *see* HUGHES, A. H. 83–93
HARFOOT, C. G., NOBLE, R. C. & MOORE, J. H. Food particles as a site for biohydrogenation of unsaturated fatty acids in the rumen 829–832
HASSALL, H. *see* COOTE, J. G. 409–422, 423–433
HAWKINS, R. A., HOUGHTON, C. R. S. & WILLIAMSON, D. H. Hepatic redox state and gluconeogenesis from lactate *in vivo* in the rat 19–25
HEARSE, D. J. & WEBER, W. W. Multiple *N*-acetyltransferases and drug metabolism. Tissue distribution, characterization and significance of mammalian *N*-acetyltransferase 519–526
HELLMAN, B., IDAHL, L.-Å., LERNMARK, Å., SEHLIN, J. & TÄLJEDAL, I.-B. Iodoacetamide-induced sensitization of the pancreatic β-cells to glucose stimulation 775–789
HINTON, R. H. *see* PROSPERO, T. D. 449–458
HOPE, D. B. *see* PICKUP, J. C. 361–371
HOUGHTON, C. R. S. *see* HAWKINS, R. A. 19–25
HUGHES, A. H., HANCOCK, I. C. & BADDILEY, J. The function of teichoic acids in cation control in bacterial membranes 83–93
HUGHES, C. *see* GOLDSTONE, A. 259–266

IDAHL, L.-Å. *see* HELLMAN, B. 775–789
ILIFFE, J. *see* KNIGHT, B. L. 77–82

JACKNOWITZ, A. *see* GESSNER, T. 249–258
JOHNSTON, C. I. *see* PICKUP, J. C. 361–371
JONES, G. M. & MAYER, R. J. Degradation of glucose-metabolizing enzymes in the rat small intestine during starvation 657–661
JONES, G. M. & MAYER, R. J. Glucose metabolism in the rat small intestine: the effect of glucose analogues on hexokinase activity 125–128
JOTHY, S., TAY, S. & SIMPKINS, H. The role of membrane phospholipids in the interaction of ribosomes with endoplasmic-reticulum membrane 637–640

KAHLENBERG, A. *see* GERMINARIO, R. J. 395–402, 403–408
KANE-MAGUIRE, B. *see* SIDDLE, K. 765–773
KATZ, J. *see* ROGNSTAD, R. 349–352
KAY, J. E. & LINDSAY, V. J. Control of ornithine decarboxylase activity in stimulated human lymphocytes by putrescine and spermidine 791–796
KELLER, J. M. *see* NARUMI, K. 329–340
KNIGHT, B. L. & ILIFFE, J. The effect of glucose, insulin and noradrenaline on lipolysis, and on the concentrations of adenosine 3′:5′-cyclic monophosphate and adenosine 5′-triphosphate in adipose tissue 77–82
KODICEK, E. *see* BARNES, M. J. 113–115
KOENIG, H. *see* GOLDSTONE, A. 259–266, 267–282
KOEPPE, R. E. *see* MUSHAHWAR, I. K. 353–359
KÖHLER, G. *see* MURDOCK, L. L. 681–688
KONDRUP, J. & GRUNNET, N. The effect of acute and prolonged ethanol treatment on the contents of coenzyme A, carnitine and their derivatives in rat liver 373–379
KORNBERG, H. L. *see* FERENCI, T. 341–347
KREBS, H. A. *see* WOODS, H. F. 55–60
KULONEN, E. *see* AALTO, M. 663–671

LAMPIAHO, K. *see* AALTO, M. 663–671
LEMONNIER, D. *see* DE GASQUET, P. 633–635
LERNMARK, Å. *see* HELLMAN, B. 775–789
LINDSAY, V. J. *see* KAY, J. E. 791–796
LLOYD, D. *see* CARTLEDGE, T. G. 609–621
LONG, C. & MOUAT, B. The influx of calcium ions into human erythrocytes during cold storage 559–570
LONG, G. L. *see* MUKKADA, A. J. 155–162
LU, C. Y. *see* GOLDSTONE, A. 259–266

MATHIAS, A. P. *see* AUSTOKER, J. 813–819; GONZALEZ-MUJICA, F. 163–183

MAYER, R. J. *see* JONES, G. M. 125–128, 657–661
MAYNARD, P. V. & CAMERON, E. H. D. Adrenal microsomal C_{19}-steroid 5α-reductase activity in the Snell transplantable rat adrenocortical tumour 494 and the effect of oestradiol, testosterone propionate and adrenocorticotrophin in intact and gonadectomized rats 293–300
MAYNARD, P. V. & CAMERON, E. H. D. Metabolism of androst-4-ene-3,17-dione by subcellular fractions of rat adrenal tissue with particular reference to microsomal C_{19}-steroid 5α-reductase 282–291
MCCANN, L. M. *see* COX, G. B. 689–695
MCDONALD-GIBSON, R. G., FLACK, J. D. & RAMWELL, P. W. Inhibition of prostaglandin biosynthesis by 7-oxa- and 5-oxa-prostaglandin analogues 117–120
MCGIVAN, J. D. *see* CROMPTON, M. 27–34
MEINERS, B. *see* POSSMAYER, F. 381–394
MERRY, A. H., DOLPHIN, P. J., MUNDAY, K. A. & AKHTAR, M. Studies on the assembly and secretion of a multicomponent protein. The biosynthesis of vitellogenin, an oestrogen-induced glycolipophosphoprotein 459–463
MIDDLETON, B. The acetoacetyl-coenzyme A thiolases of rat brain and their relative activities during postnatal development 731–737
MIDDLETON, B. The oxoacyl-coenzyme A thiolases of animal tissues 717–730
MIDGLEY, M. & DAWES, E. A. The regulation of transport of glucose and methyl α-glucoside in *Pseudomonas aeruginosa* 141–154
MILCH, P. O. *see* SMITH, J. E. 821–827
MILSOM, J. P. & WYNN, C. H. The heterogeneous distribution of acid hydrolases within a homogeneous population of cultured mammalian cells 493–500
MILTHORPE, P. & FORSDYKE, D. R. Serum factors affecting the incorporation of [^{3}H]uridine by lymphocytes stimulated by concanavalin A 803–812
MITCHELL, P. *see* MOYLE, J. 571–585; WEST, I. C. 587–592
MITROPOULOS, K. A. *see* GIBBONS, G. F. 439–448
MOORE, J. H. *see* HARFOOT, C. G. 829–832
MORTON, L. F. *see* BARNES, M. J. 113–115
MOUAT, B. *see* LONG, C. 559–570
MOYLE, J. & MITCHELL, P. The proton-translocating nicotinamide–adenine dinucleotide (phosphate) transhydrogenase of rat liver mitochondria 571–585
MUDD, J. B. *see* POSSMAYER, F. 381–394
MUKKADA, A. J., LONG, G. L. & ROMANO, A. H. The uptake of 2-deoxy-D-glucose by *Pseudomonas aeruginosa* and its regulation 155–162
MUNDAY, K. A. *see* MERRY, A. H. 459–463
MURDOCK, L. L., WIRTZ, R. A. & KÖHLER, G. 3,4-Dihydroxyphenylalanine (dopa) decarboxylase activity in the arthropod nervous system 681–688
MUSHAHWAR, I. K. & KOEPPE, R. E. Free amino acids of testes. Concentrations of free amino acids in the testes of several species and the precursors of glutamate and glutamine in rat testes *in vivo* 353–359
MUTO, Y. *see* SMITH, J. E. 821–827

NAKAMURA, S. *see* PICKUP, J. C. 361–371
NARUMI, K., KELLER, J. M. & BALLOU, C. E. Biosynthesis of a mycobacterial lipopolysaccharide. Incorporation of [^{14}C]acyl groups by whole cells *in vivo* 329–340
NAYYAR, R. *see* GOLDSTONE, A. 259–266
NEWSHOLME, E. A. *see* VAUGHAN, H. 527–535
NG, F. M.-W. & DAWES, E. A. Chemostat studies on the regulation of glucose metabolism in *Pseudomonas aeruginosa* by citrate 129–140
NICHOLLS, D. G. *see* SÁNCHEZ, M. 697–706
NOBLE, R. C. *see* HARFOOT, C. G. 829–832
NORRIS, K. A. *see* PROSPERO, T. D. 449–458

ORD, M. G. & STOCKEN, L. A. Uptake of orotate and thymidine by normal and regenerating rat livers 47–54

PARKER, M. G. *see* SELF, C. H. 215–221
PATEL, M. S. & TILGHMAN, S. M. Regulation of pyruvate metabolism via pyruvate carboxylase in rat brain mitochondria 185–192
PEGG, A. E. Inhibition of spermidine formation in rat liver and kidney by methylglyoxal bis(guanylhydrazone) 537–540
PÉQUIGNOT, E. *see* DE GASQUET, P. 633–635
PICKUP, J. C., JOHNSTON, C. I., NAKAMURA, S., UTTENTHAL, L. O. & HOPE, D. B. Subcellular organization of neurophysins, oxytocin, [8-lysine]-vasopressin and adenosine triphoxphatase in porcine posterior pituitary lobes 361–371
PIKKARAINEN, J. *see* AALTO, M. 663–671
PINSKY, L. *see* GERMINARIO, R. J. 395–402, 403–408
POSSMAYER, F., MEINERS, B. & MUDD, J. B. Regulation by cytidine nucleotides of the acylation of *sn*-[^{14}C]glycerol 3-phosphate. Regional and subcellular distribution of the enzymes responsible for phosphatidic acid synthesis *de novo* in the central nervous system of the rat 381–394
PRIDHAM, J. B. *see* BOURNE, E. J. 435–438
PROSPERO, T. D., BURGE, M. L. E., NORRIS, K. A., HINTON, R. H. & REID, E. Alkaline ribonuclease and phosphodiesterase activity in rat liver plasma membranes 449–458

QUASTEL, J. H. *see* GREWAAL, D. S. 1–14
QUIRK, S. J., BYRNE, J. & ROBINSON, G. B. Studies on the turnover of protein and glycoprotein components in rabbit kidney brush borders 501–508

RAMWELL, P. W. *see* MCDONALD-GIBSON, R. G. 117–120
RANDLE, P. J. *see* ASHCROFT, S. J. H. 223–231
REDDINGTON, M., RODNIGHT, R. & WILLIAMS, M. Turnover of protein-bound serine phosphate in respiring slices of guinea-pig cerebral cortex. Effects of putative transmitters, tetrodotoxin and other agents 475–482
REID, E. *see* PROSPERO, T. D. 449–458
RIEBER, M. & BACALAO, J. Phosphorylation of high-molecular-weight membrane protein species in Chinese-hamster ovary cells in culture: effect of 6-*N*,2′-*O*-dibutyryladenosine 3′:5′-cyclic monophosphate plus testosterone 641–644
ROBINSON, D. S. *see* CRYER, A. 383–836
ROBINSON, G. B. *see* QUIRK, S. J. 501–508
RODNIGHT, R. *see* REDDINGTON, M. 475–482; WELLER, M. 483–492
ROGNSTAD, R. & KATZ, J. Malate exchange between the cytosol and mitochondria 349–352
ROMANO, A. H. *see* MUKKADA, A. J. 155–162

ROWE, C. E. *see* VYVODA, O. S. 233–248
ROWE, J. J. M. *see* BOURNE, E. J. 435–438

SÁNCHEZ, M., NICHOLLS, D. G. & BRINDLEY, D. N. The relationship between palmitoyl-coenzyme A synthetase activity and esterification of *sn*-glycerol 3-phosphate in rat liver mitochondria 697–706
SCHAEFER, J.-M. *see* DIAUGUSTINE, R. P. 323–327
SEGAL, S. *see* STATES, B. 623–631
SEHLIN, J. *see* HELLMAN, B. 775–789
SELF, C. H., PARKER, M. G. & WEITZMAN, P. D. J. The isocitrate dehydrogenases of *Acinetobacter lwoffi*. Studies on the regulation of a nicotinamide–adenine dinucleotide phosphate-linked isoenzyme 215–221
SENDER, P. M. & GARLICK, P. J. Synthesis rates of protein in the Langendorff-perfused rat heart in the presence and absence of insulin, and in the working heart 603–608
SENDER, P. M. *see also* CHAIN, E. B. 593–601
SHIRLEY, I. M. *see* GIORGI, E. P. 465–474
SIDDLE, K., KANE-MAGUIRE, B. & CAMPBELL, A. K. The effects of glucagon and insulin on adenosine 3′:5′-cyclic monophosphate concentrations in an organ culture of mature rat liver 756–773
SIMPKINS, H. *see* JOTHY, S. 637–640
SINGH, R. K., BEN-AZIZ, A. BRITTON, G. & GOODWIN, T. W. Biosynthesis of spheroidene and hydroxyspheroidene in *Rhodopseudomonas* species: experiments with nicotine as inhibitor 649–652
SIVARAMA SASTRY, K. *see* VENKATESWERLU, G. 673–680
SMITH, J. E., MILCH, P. O., MUTO, Y. & GOODMAN, DeW.S. The plasma transport and metabolism of retinoic acid in the rat. 821–827
SNELL, K. & WALKER, D. G. Glucose metabolism in the newborn rat. Temporal studies *in vivo* 739–752
STANLEY, K. K. *see* STEWART, H. B. 61–76
STATES, B. & SEGAL, S. Interrelationship of glutathione–cystine transhydrogenase and glutathione reductase in developing rat intestine 623–631
STEWART, H. B., TUBBS, P. K. & STANLEY, K. K. Intermediates in fatty acid oxidation 61–76
STEWART, J. C. *see* GIORGI, E. P. 465–474
STOCKEN, L. A. *see* ORD, M. G. 47–54
STRONG, C. R., CAREY, E. M. & DILS, R. The synthesis of medium-chain fatty acids by lactating-rabbit mammary gland studied *in vitro* 121–123
SUZUKI, T. Metabolism of methylamine in the tea plant (*Thea sinensis* L.) 753–763

TÄLJEDAL, I.-B. *see* HELLMAN, B. 775–789
TAY, S. *see* JOTHY, S. 637–640
THORNTON, S. D. *see* VAUGHAN, H. 527–535
TILGHMAN, S. M. *see* PATEL, M. S. 185–192
TUBBS, P. K. *see* STEWART, H. B. 61–76

UTTENTHAL, L. O. *see* PICKUP, J. C. 361–371

VAUGHAN, H., THORNTON, S. D. & NEWSHOLME, E. A. The effects of calcium ions on the activities of trehalase, hexokinase, phosphofructokinase, fructose diphosphatase and pyruvate kinase from various muscles 527–535
VENKATESWERLU, G. & SIVARAMA SASTRY, K. Interrelationships in trace-element metabolism in metal toxicities in a cobalt-resistant strain of *Neurospora crassa* 673–680
VOLLMER, C. A. *see* GESSNER, T. 249–258
VYVODA, O. S. & ROWE, C. E. Glyceride lipases in nerve endings of guinea-pig brain and their stimulation by noradrenaline, 5-hydroxytryptamine and adrenaline 233–248

WALKER, D. G. *see* SNELL, K. 739–752
WEBER, W. W. *see* HEARSE, D. J. 519–526
WEERASINGHE, L. C. C. *see* ASHCROFT, S. J. H. 223–231
WEITZMAN, P. D. J. *see* SELF, C. H. 215–221
WELLER, M. & RODNIGHT, R. Protein kinase activity in membrane preparations from ox brain. Stimulation of intrinsic activity by adenosine 3′:5′-cyclic monophosphate 483–492
WELLS, H. *see* FRANKEL, D. L. 645–648
WEST, I. C. & MITCHELL, P. Stoicheiometry of lactose-proton symport across the plasma membrane of *Escherichia coli* 587–592
WILLIAMS, M. *see* REDDINGTON, M. 475–482
WILLIAMSON, D. H. *see* BUCKLEY, B. M. 653–656; HAWKINS, R. A. 19–25
WILSON, M. B. Control of phosphoenolpyruvate synthesis in guinea-pig mitochondria 553–557
WING, D. R. *see* CRYER, A. 833–836
WIRTZ, R. A. *see* MURDOCK, L. L. 681–688
WOODS, H. F. & KREBS, H. A. The effect of glycerol and dihydroxyacetone on hepatic adenine nucleotides 55–60
WYNN, C. H. *see* MILSOM, J. P. 493–500

ZATMAN, L. J. *see* COLBY, J. 101–112
ZIMMERMAN, E. F. *see* GUSTINE, D. L. 541–551

Index of Subjects

Acetate, comparison of ethanol, glucose and, as precursors of glutamate in rat testes (Mushahwar, I. K. & Koeppe, R. E.) 353–359

[1-^{14}C]Acetate, incorporation of [1-^{14}C]propionate, [1-^{14}C]isobutyrate and, into 6-*O*-methylglucose-containing lipopolysaccharides by whole cells of *Mycobacterium phlei* 356 *in vivo* (Narumi, K., Keller, J. M. & Ballou, C. E.) 329–340

Acetate, role of, as an intermediate during growth of *Pseudomonas* AM1 on C_1 compounds, ethanol and 3-hydroxybutyrate (Dunstan, P. M. & Anthony, C.) 797–801

Acetoacetate, effect of, on the biosynthesis of phosphoenolpyruvate in guinea-pig liver mitochondria (Wilson, M. B.) 553–557

Acetoacetyl-coenzyme A synthetase, developmental changes in the activity of, in the cytosol of rat brain (Buckley, B. M. & Williamson, D. H.) 653–656

Acetoacetyl-coenzyme A thiolases, activities, substrate specificities and subcellular distributions of, in various animal tissues (Middleton, B.) 717–730

Acetoacetyl-coenzyme A thiolases, changes in the activities of, in rat brain during development (Middleton, B.) 731–737

Acetylcarnitine, effects of acute and prolonged treatment with ethanol on the concentrations of coenzyme A, carnitine and their derivatives including, in rat liver (Kondrup, J. & Grunnet, N.) 373–379

Acetylcholine, biosynthesis of, in nettle (Barlow, R. B. & Dixon, R. O. D.) 15–18

[^{14}C]Acetylcholine, effects of neurotropic drugs on the biosynthesis and release of, in rat cerebral-cortex slices (Grewaal, D. S. & Quastel, J. H.) 1–14

Acetyl-coenzyme A carboxylase, effect of treatment with insulin on the activity of, in rat epididymal adipose tissue *in vitro* (Halestrap, A. P. & Denton, R. M.) 509–517

Acetyl-coenzyme A, effects of acute and prolonged treatment with ethanol on the concentrations of carnitine, coenzyme A and their derivatives including, in rat liver (Kondrup, J. & Grunnet, N.) 373–379

Acetyl-coenzyme A, occurrence of intermediates in the oxidative degradation of octanoate to, in ox liver and pig kidney mitochondrial extracts (Stewart, H. B., Tubbs, P. K. & Stanley, K. K.) 61–76

β-*N*-Acetylglucosaminidase, heterogeneous distribution of, and other acid hydrolases in subgroups of lysosomes from a homogeneous population of cultured Chinese-hamster ovary fibroblasts (Milsom, J. P. & Wynn, C. H.) 493–500

N-Acetylneuraminic acid, attachment of sugar sequences containing, to rat kidney nascent lysosomal acid hydrolases during transport from the rough endoplasmic reticulum through the Golgi apparatus (Goldstone, A. & Koenig, H.) 267–282

N-Acetyltransferases, tissue distribution, characterization and significance of, in the rabbit (Hearse, D. J. & Weber, W. W.) 519–526

Acid α-Glucosidase, *see* α-Glucosidase, acid

Acid hydrolases, *see* Hydrolases, acid

Acid phosphatase, *see* Phosphatase, acid

Acid ribonuclease, *see* Ribonuclease, acid

Acinetobacter lwoffi, regulation of a nicotinamide–adenine dinucleotide phosphate-linked isoenzyme of isocitrate dehydrogenase from (Self, C. H., Parker, M. G. & Weitzman, P. D. J.) 215–221

[^{14}C]Acyl groups, incorporation of, into 6-*O*-methylglucose-containing lipopolysaccharides by whole cells of *Mycobacterium phlei* A.T.C.C. 356 *in vivo* (Narumi, K., Keller, J. M. & Ballou, C. E.) 329–340

Acyl (long-chain)-carnitine, effects of acute and prolonged treatment with ethanol on the concentrations of coenzyme A, carnitine and their derivatives including, in rat liver (Kondrup, J. & Grunnet, N.) 373–379

Acyl (long-chain)-coenzyme A, effects of acute and prolonged treatment with ethanol on the concentrations of carnitine, coenzyme A and their derivatives including, in rat liver (Kondrup, J. & Grunnet, N.) 373–379

Acyl (long-chain)-coenzyme A, possible role of, in the regulation by insulin of the activity of acetyl-coenzyme A carboxylase in rat epididymal adipose tissue (Halestrap, A. P. & Denton, R. M.) 509–517

Adenine nucleotides, effects of glycerol and dihydroxyacetone on the concentrations of, in perfused rat liver (Woods, H. F. & Krebs, H. A.) 55–60

Adenine nucleotides, role of, in the regulation of a nicotinamide–adenine dinucleotide phosphate-linked isoenzyme of isocitrate dehydrogenase from *Acinetobacter lwoffi* (Self, C. H., Parker, M. G. & Weitzman, P. D. J.) 215–221

Adenine nucleotides, role of, in the regulation of pyruvate metabolism via pyruvate carboxylase in rat brain mitochondria (Patel, M. S. & Tilghman, S. M.) 185–192

Adenosine 3′:5′-cyclic monophosphate, 6-*N*,2′-*O*-dibutyryl-, effect of testosterone plus, on the phosphorylation of high-molecular-weight membrane proteins in cultured Chinese-hamster ovary cells (Rieber, M. & Bacalao, J.) 641–644

Adenosine 3′:5′-cyclic monophosphate, effects of glucagon and insulin on the concentration of, in an organ culture of rat liver (Siddle, K., Kane-Maguire, B. & Campbell, A. K.) 765–773

Adenosine 3′:5′-cyclic monophosphate, effects of glucose, insulin and noradrenaline on lipolysis and on the concentrations of adenosine triphosphate and, in rat epididymal adipose tissue (Knight, B. L. & Iliffe, J.) 77–82

Adenosine 3′:5′-cyclic monophosphate, role of, in the control of cholesteryl ester biosynthesis in rabbit ovary interstitial tissue (Flint, A. P. F., Grinwich, D. L. & Armstrong, D. T.) 313–321

Adenosine 3′:5′-cyclic monophosphate, stimulation by, of the intrinsic protein kinase activity in membrane preparations from ox cerebral cortex (Weller, M. & Rodnight, R.) 483–492

[^{14}C]Adenosine, incorporation of [^{3}H]uridine, [^{14}C]-orotate and, into ribonucleic acid, *in vivo*, in rat brain nuclei subsequently fractionated by zonal centrifugation (Austoker, J., Cox, D. & Mathias, A. P.) 813–819

Adenosine, inhibition by, of the acetivity of protein kinase in membrane preparations from ox cerebal cortex (Weller, M. & Rodnight, R.) 483–492
Adenosine triphosphatase, changes in the activities and subcellular distribution of, and other enzymes during glucose de-repression and respiratory adaptation of *Saccharomyces carlsbergensis* (Cartledge, T. G. & Lloyd, D.) 609–621
Adenosine triphosphatase, magnesium ion- or calcium ion-stimulated, reconstitution of the energy-linked nicotinamide–adenine dinucleotide (phosphate) transhydrogenase activity in membranes from a mutant strain of *Escherichia coli* K12 lacking (Cox, G. B., Gibson, F., McCann, L. M., Butlin, J. D. & Crane, F. L.) 689–695
Adenosine triphosphatase, subcellular organization of neurophysins, oxytocin, [8-lysine]-vasopressin and, in pig posterior pituitary gland (Pickup, J. C., Johnston, C. I., Nakamura, S., Uttenthal, L. O. & Hope, D. B.) 361–371
Adenosine triphosphate, effect of, on the biosynthesis of phosphoenolpyruvate in guinea-pig liver mitochondria (Wilson, M. B.) 553–557
Adenosine triphosphate, effects of glucose, insulin and noradrenaline on lipolysis and on the concentrations of adenosine 3′:5′-cyclic monophosphate and, in rat epididymal adipose tissue (Knight, B. L. & Iliffe, J.) 77–82
Adenosine triphosphate, interrelationships between metabolism, insulin release and the concentration of, in isolated mouse pancreas islets of Langerhans (Ashcroft, S. J. H., Weerasinghe, L. C. C. & Randle, P. J.) 223–231
Adipocytes, relationship between the activity of clearing-factor lipase and the surface area of, in the perirenal and perigenital adipose tissue of the genetically obese Zucker rat (de Gasquet, P., Péquignot, E., Lemonnier, D. & Alexiu, A.) 633–635
Adipose tissue, epididymal, rat, effect of cycloheximide on the activity of clearing-factor lipase in, *in vitro* (Cryer, A., Foster, B., Wing, D. R. & Robinson, D. S.) 833–836
Adipose tissue, epididymal, rat, effect of treatment with insulin on the activity of acetyl-coenzyme A carboxylase in, *in vitro* (Halestrap, A. P. & Denton, R. M.) 509–517
Adipose tissue, epididymal, rat, effects of glucose, insulin and noradrenaline on lipolysis and on the concentrations of adenosine 3′:5′-cyclic monophosphate and adenosine triphosphate in (Knight, B. L. & Iliffe, J.) 77–82
Adipose tissue, perirenal and perigenital, relationship between the activity of clearing-factor lipase and cellularity in, of the genetically obese Zucker rat (de Gasquet, P., Péquignot, E., Lemonnier, D. & Alexiu, A.) 633–635
Adrenal gland, rat, effects of various hormonal treatments on the activity of microsomal C_{19} steroid 5α-reductase in (Maynard, P. V. & Cameron, E. H. D.) 293–300
Adrenal gland, rat, metabolism of androst-4-ene-3,17-dione by subcellular fractions of, with particular reference to microsomal C_{19} steroid 5α-reductase (Maynard, P. V. & Cameron, E. H. D.) 283–291
Adrenaline, stimulation by, of glyceride lipases in nerve endings of guinea-pig brain (Vyvoda, O. S. & Rowe, C. E.) 233–248
Adrenocortical tumour, Snell 494, rat, activity of microsomal C_{19} steroid 5α-reductase in (Maynard, P. V. & Cameron, E. H. D.) 293–300
Adrenocorticotrophin, *see* Corticotrophin
Albumin, serum, rat, transport of retinoate bound to, in the plasma (Smith, J. E., Milch, P. O., Muto, Y. & Goodman, DeW.S.) 821–827
Aldolase, *see* Fructose diphosphate aldolase
Alkaline phosphodiesterase, *see* Phosphodiesterase, alkaline
Alkaline ribonuclease, *see* Ribonuclease, alkaline
Amino acids, free, concentrations of, in the testes of various species (Mushahwar, I. K. & Koeppe, R. E.) 353–359
Amino acids, metabolism of, in slices of experimentally induced rat granulation tissue (Aalto, M., Lampiaho, K., Pikkarainen, J. & Kulonen, E.) 663–671
p-Aminobenzoate, acetylation of, by *N*-acetyltransferases of various tissues of the rabbit (Hearse, D. J. & Weber, W. W.) 519–526
Ammonium acetate, effect of treatment with, on the concentrations of free amino acids in rat testes (Mushahwar, I. K. & Koeppe, R. E.) 353–359
Androgens, effects of cyproterone and cyproterone acetate on the dynamics of the uptake and metabolism of, by human prostate gland *in vitro* (Giorgi, E. P., Shirley, I. M., Grant, J. K. & Stewart, J. C.) 465–474
Androst-4-ene-3,17-dione, effects of cyproterone and cyproterone acetate on the dynamics of the uptake and metabolism of, and other androgens by human prostate gland *in vitro* (Giorgi, E. P., Shirley, I. M., Grant, J. K. & Stewart, J. C.) 465–474
Androst-4-ene-3,17-dione, metabolism of, by subcellular fractions of rat adrenal gland with particular reference to microsomal C_{19} steroid 5α-reductase (Maynard, P. V. & Cameron, E. H. D.) 283–291
Arachidonate, inhibition by 7-oxa- and 5-oxa-prostaglandin analogues of the biosynthesis of prostaglandins E_2 and $F_{2\alpha}$ from arachidonate by an ox seminal-vesicle microsomal preparation (McDonald-Gibson, R. G., Flack, J. D. & Ramwell, P. W.) 117–120
Arylsulphatases A and B, heterogeneous distribution of, and other acid hydrolases in subgroups of lysosomes from a homogeneous population of cultured Chinese-hamster ovary fibroblasts (Milsom, J. P. & Wynn, C. H.) 493–500
Asparaginase, effect of treatment with, on the concentrations of asparagine in tissues of weanling rats (Frankel, D. L., Wells, H. & Fillios, L. C.) 645–648
Asparagine, concentrations of, in tissue of weanling rats after enzymic or dietary depletion of asparagine (Frankel, D. L., Wells, H. & Fillios, L. C.) 645–648
Aspartate, concentrations of asparagine and, in tissues of weanling rats after enzymic or dietary depletion of asparagine (Frankel, D. L., Wells, H. & Fillios, L. C.) 645–648

Bacillus licheniformis A.T.C.C. 9945, function of cell-wall and membrane teichoic acids in maintaining the correct ionic environment for cation-dependent enzyme systems of the membrane of (Hughes, A. H., Hancock, I. C. & Baddiley, J.) 83–93

Bacteria, methylotrophic, obligate and facultative, metabolism of trimethylamine in (Colby, J. & Zatman, L. J.) 101–112
Barbiturate drugs, effects of, on the biosynthesis and release of [^{14}C]acetylcholine in rat cerebral-cortex slices (Grewaal, D. S. & Quastel, J. H.) 1–14
Bone, hydroxylation of lysine residues of collagen biosynthesized in, of rachitic rats and chicks (Barnes, M. J., Constable, B. J., Morton, L. F. & Kodick, E.) 113–115
Brain cortex, guinea-pig, effects of putative neurotransmitters, tetrodotoxin and other agents on the turnover of protein-bound serine phopshate in respiring slices of (Reddington, M., Rodnight, R. & Williams, M.) 475–482
Brain cortex, ox, stimulation by adenosine 3′:5′-cyclic monophosphate of the intrinsic protein kinase activity in membrane preparations from (Weller, M. & Rodnight, R.) 483–492
Brain cortex, rat, effects of neurotropic drugs on the biosynthesis and release of [^{14}C]acetylcholine in slices of (Grewaal, D. S. & Quastel, J. H.) 1–14
Brain, determination of phenethylamine and related compounds in the liver and, of rats with phenylketonuria-like characteristics induced by the injection of *p*-chlorophenylalanine (Edwards, D. J. & Blau, K.) 95–100
Brain, guinea-pig, activities of glyceride lipases in nerve endings of, and their stimulation by noradrenaline, 5-hydroxytryptamine and adrenaline (Vyvoda, O. S. & Rowe, C. E.) 233–248
Brain, locust, 3,4-dihydroxyphenylalanine (dopa) decarboxylase activity in, and in that of other arthropods (Murdock, L. L., Wirtz, R. A. & Köhler, G.) 681–688
Brain, rat, biosynthesis of ribonucleic acid *in vivo* in nuclei of, subsequently fractionated by zonal centrifugation (Austoker, J., Cox, D. & Mathias, A. P.) 813–819
Brain, rat, changes in the activities of 3-oxoacyl-coenzyme A thiolases in, during development (Middleton, B.) 731–737
Brain, rat, developmental changes in the activity of acetoacetyl-coenzyme A synthetase in the cytosol of (Buckley, B. M. & Williamson, D. H.) 653–656
Brain, rat, regional and subcellular distribution of the enzymes responsible for the biosynthesis of phosphatidate *de novo* in (Possmayer, F., Meiners, B. & Mudd, J. B.) 381–394
Brain, rat, regulation of pyruvate metabolism via pyruvate carboxylase in mitochondria from (Patel, M. S. & Tilghman, S. M.) 185–192
Brush borders, kidney-cortex, rabbit, turnover of protein and glycoprotein in, *in vivo* (Quirk, S. J., Byrne, J. & Robinson, G. B.) 501–508

Caffeine, utilization of methylamine for the biosynthesis of, in excised shoot tips of the tea plant (Suzuki, T.) 753–763
Calcium ions, effects of, on the activities of glycolytic enzymes in various vertebrate and invertebrate muscles (Vaughan, H., Thornton, S. D. & Newsholme, E. A.) 527–535
Calcium ions, influx of, into human erythrocytes during storage in the cold (Long, C. & Mouat, B.) 559–570
Caprate, *see* Decanoate
Caprylate, *see* Octanoate
Carbon monoxide, effect of, on the nature of the accumulated 4,4-dimethyl sterol precursors of cholesterol during its biosynthesis from mevalonate by a rat liver preparation (Gibbons, G. F. & Mitropoulos, K. A.) 439–448
Carnitine, effects of acute and prolonged treatment with ethanol on the concentrations of coenzyme A and, and their derivatives in rat liver (Kondrup, J. & Grunnet, N.) 373–379
Castration, effects of various hormonal treatments and, on the activity of microsomal C_{19} steroid 5α-reductase in rat adrenal gland (Maynard, P. V. & Cameron, E. H. D.) 293–300
Cathepsin D, heterogeneous distribution of, and other acid hydrolases in subgroups of lysosomes from a homogeneous population of cultured Chinese-hamster ovary fibroblasts (Milsom, J. P. & Wynn, C. H.) 493–500
Cations, function of cell-wall and membrane teichoic acids in maintaining the correct ionic environment for enzyme systems of the membrane of *Bacillus licheniformis* A.T.C.C. 9945 that are dependent on (Hughes, A. H., Hancock, I. C. & Baddiley, J.) 83–93
Cations, univalent, depletion of, and the influx of calcium ions into human erythrocytes during storage in the cold (Long, C. & Mouat, B.) 559–570
Cell wall, function of the teichoic acids of the membrane and, in maintaining the correct ionic environment for cation-dependent enzyme systems of the membrane of *Bacillus licheniformis* A.T.C.C. 9945 (Hughes, A. H., Hancock, I. C. & Baddiley, J.) 83–93
Cells, ovary, Chinese-hamster, cultured, effect of 6-*N*,2′-*O*-dibutyryladenosine 3′:5′-cyclic monophosphate plus testosterone on the phosphorylation of high-molecular-weight membrane proteins in (Rieber, M. & Bacalao, J.) 641–644
Central nervous system, *see* Nervous system, central
Cerebral cortex, guinea-pig, effects of putative neurotransmitters, tetrodotoxin and other agents on the turnover of protein-bound serine phosphate in respiring slices of (Reddington, M., Rodnight, R. & Williams, M.) 475–482
Cerebral cortex, ox, stimulation by adenosine 3′:5′-cyclic monophosphate of the intrinsic protein kinase activity in membrane preparations from (Weller, M. & Rodnight, R.) 483–492
Cerebral cortex, rat, effects of neurotropic drugs on the biosynthesis and release of [^{14}C]acetylcholine in slices of (Grewaal, D. S. & Quastel, J. H.) 1–14
p-Chlorophenylalanine, determination of phenethylamine and related compounds in the brain and liver of rats with phenylketonuria-like characteristics induced by the injection of (Edwards, D. J. & Blau, K.) 95–100
Cholesterol, effect of carbon monoxide on the nature of the accumulated 4,4-dimethyl sterol precursors of, during its biosynthesis from mevalonate by a rat liver preparation (Gibbons, G. F. & Mitropoulos, K. A.) 439–448
Cholesterol esterase, activities of, and other enzymes involved in steroid biosynthesis and cholesteryl ester metabolism in rabbit ovary interstitial tissue and corpora lutea (Flint, A. P. F. & Armstrong, D. T.) 301–311

Cholesterol side-chain cleavage enzyme, activities of, and other enzymes involved in steroid biosynthesis and cholesteryl ester metabolism in rabbit ovary interstitial tissue and corpora lutea (Flint, A. P. F. & Armstrong, D. T.) 301–311

Cholesteryl ester synthetase, activities of, and other enzymes involved in steroid biosynthesis and cholesteryl ester metabolism in rabbit ovary interstitial tissue and corpora lutea (Flint, A. P. F. & Armstrong, D. T.) 301–311

Cholesteryl ester synthetase, control of the activity of, in rabbit ovary interstitial tissue (Flint, A. P. F., Grinwich, D. L. & Armstrong, D. T.) 313–321

Cholesteryl esters, activities of enzymes involved in steroid biosynthesis and the metabolism of, in rabbit ovary interstitial tissue and corpora lutea (Flint, A. P. F. & Armstrong, D. T.) 301–311

Cholesteryl esters, content of, in lipid droplets isolated from rat liver (DiAugustine, R. P., Schaefer, J.-M. & Fouts, J. R.) 323–327

Cholesteryl esters, control of the metabolism of, in rabbit ovary interstitial tissue and in luteinized rat ovary (Flint, A. P. F., Grinwich, D. L. & Armstrong, D. T.) 313–321

Choline acetyltransferase, activity of, in nettle (Barlow, R. B. & Dixon, R. O. D.) 15–18

Citrate, chemostat studies on the regulation by, of glucose metabolism in *Pseudomonas aeruginosa* 2F32 (Ng, F. M.-W. & Dawes, E. A.) 129–140

Citric acid cycle, *see* Tricarboxylic acid cycle

Clearing-factor lipase, *see* Lipase, clearing-factor

Cobalt ions, interrelationships in trace-element metabolism in toxicities of metal ions towards a strain of *Neurospora crassa* resistant to (Venkateswerlu, G. & Sivarama Sastry, K.) 673–680

Coenzyme A, effects of acute and prolonged treatment with ethanol on the concentrations of carnitine and, and their derivatives in rat liver (Kondrup, J. & Grunnet, N.) 373–379

Collagen, biosynthesis of, in slices of experimentally induced rat granulation tissue (Aalto, M., Lampiaho, K., Pikkarainen, J. & Kulonen, E.) 663–671

Collagen, hydroxylation of lysine residues of, biosynthesized in bone of rachitic rats and chicks (Barnes, M. J., Constable, B. J., Morton, L. F. & Kodicek, E.) 113–115

Complement, inhibition by, of the concanavalin A-stimulated incorporation of [^{3}H]uridine into ribonucleic acid of rat lymphocytes (Milthorpe, P. & Forsdyke, D. R.) 803–812

Concanavalin A, inhibition by complement of the stimulation by, of the incorporation of [^{3}H]uridine into ribonucleic acid of rat lymphocytes (Milthorpe, P. & Forsdyke, D. R.) 803–812

Copper ions, interrelationships in trace-element metabolism in toxicities of, and other metal ions towards a cobalt ion-resistant strain of *Neurospora crassa* (Venkateswerlu, G. & Sivarama Sastry, K.) 673–680

Corpora lutea, ovary, rabbit activities of enzymes involved in steroid biosynthesis and cholesteryl ester metabolism in, and interstitial tissue (Flint, A. P. F. & Armstrong, D. T.) 301–311

Corticotrophin, effects of treatment with oestradiol, testosterone and, on the activity of microsomal C_{19} steroid 5α-reductase in the adrenal glands of intact and castrated rats (Maynard, P. V. & Cameron, E. H. D.) 293–300

Cortisone, activation by, of rat liver lysosomal α-glucosidase (Bourne, E. J., Clarke, K., Pridham, J. B. & Rowe, J. J. M.) 435–438

Crotonate, effects of the injection of, on the redox state and on gluconeogenesis from lactate in rat liver *in vivo* (Hawkins, R. A., Houghton, C. R. S. & Williamson, D. H.) 19–25

Cyclic adenosine 3′:5′-monophosphate, *see* Adenosine 3′:5′-cyclic monophosphate

Cycloheximide, effect of, on the activity of clearing-factor lipase in rat epididymal adipose tissue *in vitro* (Cryer, A., Foster, B., Wing, D. R. & Robinson, D. S.) 833–836

Cyproterone acetate, effects of cyproterone and, on the dynamics of the uptake and metabolism of androgens by human prostate gland *in vitro* (Giorgi, E. P., Shirley, I. M., Grant, J. K. & Stewart, J. C.) 465–474

Cyproterone, effects of cyproterone acetate and, on the dynamics of the uptake and metabolism of androgens by human prostate gland *in vitro* (Giorgi, E. P., Shirley, I. M., Grant, J. K. & Stewart, J. C.) 465–474

Cystine, interrelationship between the enzymic reduction of oxidized glutathione and, in developing rat small intestine (States, B. & Segal, S.) 623–631

Cytidine nucleotides, regulation by, of the biosynthesis of phosphatidate from *sn*-glycerol 3-phosphate in rat central nervous system (Possmayer, F., Meiners, B. & Mudd, J. B.) 381–394

Cytochrome *c* oxidase, changes in the activities and subcellular distribution of, and other enzymes during glucose de-repression and respiratory adaptation of *Saccharomyces carlsbergensis* (Cartledge, T. G. & Lloyd, D.) 609–621

Cytosol, activities and substrate specificities of 3-oxoacyl-coenzyme A thiolases in mitochondria and, of various animal tissues (Middleton, B.) 717–730

Cytosol, biosynthesis of medium-chain fatty acids by the combined microsomal fraction and, from lactating rabbit mammary gland (Strong, C. R., Carey, E. M. & Dils, R.) 121–123

Cytosol, brain, rat, changes in the activities of 3-oxoacyl-coenzyme A thiolases in, and mitochondria during development (Middleton, B.) 731–737

Cytosol, brain, rat, developmental changes in the activity of acetoacetyl-coenzyme A synthetase in (Buckley, B. M. & Williamson, D. H.) 653–656

Cytosol, kidney-cortex, rat, exchange of malate between, and mitochondria (Rognstad, R. & Katz, J.) 349–352

Decanoate, biosynthesis of octanoate and, by the microsomal plus cytosol fraction from lactating rabbit mammary gland (Strong, C. R., Carey, E. M. & Dils, R.) 121–123

2-Deoxy-D-glucose, regulation of the transport of glucose and, in *Pseudomonas aeruginosa* C.G.H. 7709 (Mukkada A. J., Long, G. L. & Romano, A. H.) 155–162

Deoxyribonucleic acid, studies on the biosynthesis of protein, ribonucleic acid and, in nuclei separated by zonal centrifugation from liver of rats treated with thioacetamide (Gonzalez-Mujica, F. & Mathias, A. P.) 163–183

Development, changes in the activities of 3-oxoacyl-coenzyme A thiolases in rat brain during (Middleton, B.) 731–737
Development, changes in the activity of acetoacetyl-coenzyme A synthetase in the cytosol of rat brain during (Buckley, B. M. & Williamson, D. H.) 653–656
Development, changes in the microhetereogeneity of foetal mouse plasma glycoproteins during (Gustine, D. L. & Zimmerman, E. F.) 541–551
Development, interrelationship between glutathione (reduced)–cystine transhydrogenase and glutathione (oxidized) reductase in rat small intestine during (States, B. & Segal, S.) 623–631
Diet, asparagine-deficient, effect of, on the concentrations of asparagine in tissues of weanling rats (Frankel, D. L., Wells, H. & Fillios, L. C.) 645–648
Diglyceride lipase, activities of, and other glyceride lipases in nerve endings of guinea-pig brain and their stimulation by noradrenaline, 5-hydroxytryptamine and adrenaline (Vyvoda, O. S. & Rowe, C. E.) 233–248
5α-Dihydrotestosterone (17β-hydroxy-5α-androstan-3-one), effects of cyproterone and cyproterone acetate on the dynamics of the uptake and metabolism of, and other androgens by human prostate gland *in vitro* (Giorgi, E. P., Shirley, I. M., Grant, J. K. & Stewart, J. C.) 465–474
Dihydroxyacetone, effects of glycerol and, on the concentrations of adenine nucleotides in perfused rat liver (Woods, H. F. & Krebs, H. A.) 55–60
3,4-Dihydroxyphenylalanine (dopa) decarboxylase, activity of, in the nervous system of the locust and other arthropods (Murdock, L. L., Wirtz, R. A. & Köhler, G.) 681–688
4,4-Dimethyl sterols, effect of carbon monoxide on the nature of, accumulated during the biosynthesis of cholesterol from mevalonate by a rat liver preparation (Gibbons, G. F. & Mitropoulos, K. A.) 439–448
Dopa (3,4-dihydroxyphenylalanine) decarboxylase, activity of, in the nervous system of the locust and other arthropods (Murdock, L. L., Wirtz, R. A. & Köhler, G.) 681–688
Drug metabolism, tissue distribution, characterization and significance in, of *N*-acetyltransferases in the rabbit (Hearse, D. J. & Weber, W. W.) 519–526

Endoplasmic reticulum, *see* Reticulum, endoplasmic
Entner–Doudoroff pathway, chemostat studies on the regulation by citrate of the activities of key enzymes of, and other pathways of glucose metabolism in *Pseudomonas aeruginosa* 2F32 (Ng, F. M.-W. & Dawes, E. A.) 129–140
Epididymis, rat, effect of cycloheximide on the activity of clearing-factor lipase in adipose tissue of (Cryer, A., Foster, B., Wing, D. R. & Robinson, D. S.) 833–836
Epididymis, rat, effect of treatment with insulin on the activity of acetyl-coenzyme A carboxylase in adipose tissue from, *in vitro* (Halestrap, A. P. & Denton, R. M.) 509–517
Epididymis, rat, effects of glucose, insulin and noradrenaline on lipolysis and on the concentrations of adenosine 3′:5′-cyclic monophosphate and adenosine triphosphate in adipose tissue of (Knight, B. L. & Iliffe, J.) 77–82
Epithelial cells, small-intestinal, rat, effects of glucose and glucose analogues on the subcellular distribution of hexokinase in (Jones, G. M. & Mayer, R. J.) 125–128
Erythrocytes, human, influx of calcium ions into, during storage in the cold (Long, C. & Mouat, B.) 559–570
Escherichia coli K12, properties of a mutant of, deficient in fructose 1-phosphate kinase activity (Ferenci, T. & Kornberg, H. L.) 341–347
Escherichia coli K12, reconstitution of the energy-linked nicotinamide–adenine dinucleotide (phosphate) transhydrogenase activity in membranes from a mutant strain of, lacking magnesium ion- or calcium ion-stimulated adenosine triphosphatase (Cox, G. B., Gibson, F., McCann, L. M., Butlin, J. D. & Crane, F. L.) 689–695
Escherichia coli, stoicheiometry of the symport of lactose and protons across the plasma membrane of (West, I. C. & Mitchell, P.) 587–592
Estradiol, *see* Oestradiol
Estrogen, *see* Oestrogen
Ethanol, comparison of acetate, glucose and, as precursors of glutamate in rat testes (Mushahwar, I. K. & Koeppe, R. E.) 353–359
Ethanol, effects of acute and prolonged treatment with, on the concentrations of coenzyme A, carnitine and their derivatives in rat liver (Kondrup, J. & Grunnet, N.) 373–379
Ethanol, role of acetate as an intermediate during growth of *Pseudomonas* AM1 on C_1 compounds, 3-hydroxybutyrate and (Dunstan, P. M. & Anthony, C.) 797–801

Fat-cells, relationship between the activity of clearing-factor lipase and the surface area of, in the perirenal and perigenital adipose tissue of the genetically obese Zucker rat (de Gasquet, P., Péquignot, E., Lemonnier, D. & Alexiu A.) 633–635
Fatty acids, medium-chain, biosynthesis of, by the microsomal plus cytosol fraction from lactating rabbit mammary gland (Strong, C. R., Carey, E. M. & Dils, R.) 121–123
Fatty acids, occurrence of intermediates in the oxidative degradation of, in ox liver and pig kidney mitochondrial extracts (Stewart, H. B., Tubbs, P. K. & Stanley, K. K.) 61–76
Fatty acids, unsaturated, role of food particles as a site for the hydrogenation of, in sheep rumen (Harfoot, C. G., Noble, R. C. & Moore, J. H.) 829–832
Fatty acyl (long-chain)-carnitine, effects of acute and prolonged treatment with ethanol on the concentrations of coenzyme A, carnitine and their derivatives including, in rat liver (Kondrup, J. & Grunnet, N.) 373–379
Fatty acyl (long-chain)-coenzyme A, effects of acute and prolonged treatment with ethanol on the concentrations of carnitine, coenzyme A and their derivatives including, in rat liver (Kondrup, K. & Grunnet, N.) 373–379
Fatty acyl (long-chain)-coenzyme A, possible role of, in the regulation by insulin of the activity of acetyl-coenzyme A carboxylase in rat epididymal adipose tissue (Halestrap, A. P. & Denton, R. M.) 509–517
Fibroblasts, ovary, Chinese-hamster, cultured, heterogeneous distribution of acid hydrolases in subgroups of lysosomes from a homogeneous population of (Milsom, J. P. & Wynn, C. H.) 493–500

Fibroblasts, skin, human, cultured, disorder in the metabolism of hyaluronate in, from a patient with Hurler's syndrome (Germinario, R. J., Kahlenberg, A. & Pinsky, L.) 403–408
Fibroblasts, skin, human, cultured, metabolism of sulphated glycosaminoglycans in, from a patient with Hurler's syndrome (Germinario, R. J., Kahlenberg, A. & Pinsky, L.) 395–402
Flight muscle, *see* Muscle, flight
α-Foetoproteins, developmental changes in the microheterogeneity of, and other glycoproteins in foetal mouse plasma (Gustine, D. L. & Zimmerman, E. F.) 541–551
Food particles, role of, as a site for the hydrogenation of unsaturated fatty acids in sheep rumen (Harfoot, C. G., Noble, R. C. & Moore, J. H.) 829–832
Fructose diphosphatase, effects of calcium ions on the activities of, and other glycolytic enzymes in various vertebrate and invertebrate muscles (Vaughan, H., Thornton, S. D. & Newsholme, E. A.) 527–535
Fructose diphosphate aldolase, degradation of, and other glyctolytic enzymes in rat small intestine during starvation (Jones, G. M. & Mayer, R. J.) 657–661
Fructose, effects of fructose 1-phosphate and, on the growth of *Escherichia coli* K12 and a mutant deficient in fructose 1-phosphate kinase activity (Ferenci, T. & Kornberg, H. L.) 341–347
Fructose 1-phosphate, effect of loading with dihydroxyacetone on the concentration of, in perfused rat liver (Woods, H. F. & Krebs, H. A.) 55–60
Fructose 1-phosphate, effects of fructose and, on the growth of *Escherichia coli* K12 and a mutant deficient in fructose 1-phosphate kinase activity (Ferenci, T. & Kornberg, H. L.) 341–347
Fructose 1-phosphate kinase, properties of a mutant of *Escherichia coli* K12 deficient in the activity of (Ferenci, T. & Kornberg, H. L.) 341–347
Fructose–phosphoenolpyruvate phosphotransferase system, increased activity of, in a mutant of *Escherichia coli* K12 deficient in fructose 1-phosphate kinase activity (Ferenci, T. & Kornberg, H. L.) 341–347

Glucagon, effects of insulin and, on the concentration of adenosine 3′:5′-cyclic monophosphate in an organ culture of rat liver (Siddle, K., Kane-Maguire, B. & Campbell, A. K.) 765–773
Gluconeogenesis, changes in, in the newborn rat immediately after birth (Snell, K. & Walker, D. G.) 739–752
Gluconeogenesis, effects of the injection of crotonate on the redox state and on, from lactate in rat liver *in vivo* (Hawkins, R. A., Houghton, C. R. S. & Williamson, D. H.) 19–25
Gluconeogenesis, exchange of malate between cytosol and mitochondria and, in rat kidney cortex (Rognstad, R. & Katz, J.) 349–352
[^{14}C]Glucosamine, incorporation of, into glycoprotein in rabbit kidney-cortex brush borders *in vivo* (Quirk, S. J., Byrne, J. & Robinson, G. B.) 501–508
Glucose, changes in the metabolism of, in the newborn rat immediately after birth (Snell, K. & Walker, D. G.) 739–752
Glucose, chemostat studies on the regulation by citrate of the metabolism of, in *Pseudomonas aeruginosa* 2F32 (Ng, F. M.-W. & Dawes, E. A.) 129–140
Glucose, comparison of acetate, ethanol and, as precursors of glutamate in rat testes (Mushahwar, I. K. & Koeppe, R. E.) 353–359
Glucose, degradation of enzymes involved in the metabolism of, in rat small intestine during starvation (Jones, G. M. & Mayer, R. J.) 657–661
Glucose dehydrogenase, role of, in the transport of glucose in *Pseudomonas aeruginosa* 2F32 (Midgley, M. & Dawes, E. A.) 141–154
Glucose, effects of, and of glucose analogues on the subcellular distribution of hexokinase in rat small-intestinal epithelial cells (Jones, G. M. & Mayer, R. J.) 125–128
Glucose, effects of insulin, noradrenaline and, on lipolysis and on the concentrations of adenosine 3′:5′-cyclic monophosphate and adenosine triphosphate in rat epididymal adipose tissue (Knight, B. L. & Iliffe, J.) 77–82
Glucose, effects of insulin on the biosynthesis of protein by perfused hearts from normal and insulin-deficient rats after depletion of glucose 6-phosphate, glycogen and (Chain, E. B. & Sender, P. M.) 593–601
Glucose, effects of insulin on the biosynthesis of protein by perfused hearts from normal and insulin-deficient rats in the presence of (Chain, E. B. P Sender, P. M.) 593–601
Glucose, effects of iodoacetamide on the stimulation by, of the release of insulin by isolated mouse pancreas islets of Langerhans (Hellman, B., Idahl, L.-Å., Lernmark, Å., Sehlin, J. & Täljedal, I.-B.) 775–789
Glucose, effects of the injection of crotonate on the redox state and on the formation of, from lactate in rat liver *in vivo* (Hawkins, R. A., Houghton, C. R. S. & Williamson, D. H.) 19–25
Glucose, exchange of malate between cytosol and mitochondria and the formation of, in rat kidney cortex (Rognstad, R. & Katz, J.) 349–352
[^{3}H]Glucose, incorporation of, into hyaluronate in cultured skin fibroblasts from a human patient with Hurler's syndrome (Germinario, R. J., Kahlenberg, A. & Pinsky, L.) 403–408
[^{3}H]Glucose, incorporation of [^{35}S]sulphate and, into sulphated glycosaminoglycans in cultured skin fibroblasts from a human patient with Hurler's syndrome (Germinario, R. J., Kahlenberg, A. & Pinsky, L.) 395–402
Glucose, interrelationships between adenosine triphosphate concentration, insulin release and the metabolism of, and other exogenous substrates by isolated mouse pancreas islets of Langerhans (Ashcroft, S. J. H., Weerasinghe, L. C. C. & Randle, P. J.) 223–231
Glucose 6-phosphate dehydrogenase, degradation of, and other glycolytic enzymes in rat small intestine during starvation (Jones, G. M. & Mayer, R. J.) 657–661
Glucose 6-phosphate, effects of insulin on the biosynthesis of protein by perfused hearts from normal and insulin-deficient rats after depletion of glucose, glycogen and (Chain, E. B. & Sender, P. M.) 593–601
Glucose, regulation of the transport of 2-deoxy-D-glucose and, in *Pseudomonas aeruginosa* C.G.H. 7709 (Mukkada, A. J., Long, G. L. & Romano, A. H.) 155–162
Glucose, regulation of the transport of methyl α-glucoside and, in *Pseudomonas aeruginosa* 2F32 (Midgley, M. & Dawes, E. A.) 141–154

α-Glucosidase, acid, lysosomal, liver, rat, activation by cortisone of (Bourne, E. J., Clarke, K., Pridham, J. B. & Rowe, J. J. M.) 435–438
Glucoside conjugates, inhibitory effects of steroids on the formation of, by a mouse liver microsomal preparation (Gessner, T., Jacknowitz, A. & Vollmer, C. A.) 249–258
Glutamate, comparison of acetate, ethanol and glucose as precursors of, in rat testes (Mushahwar, I. K. & Koeppe, R. E.) 353–359
L-Glutamate, effects of, on the biosynthesis and release of [^{14}C]acetylcholine in rat cerebral-cortex slices (Grewaal, D. S. & Quastel, J. H.) 1–14
L-Glutamate, pathway for the degradation of L-histidine, imidazol-5-yl-L-lactate and imidazol-5-ylpropionate to, in *Pseudomonas testosteroni* (Coote, J. G. & Hassall, H.) 409–422
L-Glutamate, regulation of the activities of the enzymes involved in the pathway for the degradation of L-histidine, imidazol-5-yl-L-lactate and imidazol-5-ylpropionate to, in *Pseudomonas testosteroni* (Coote, J. G. & Hassall, H.) 423–433
Glutamate, transport of glutamine and, in pig kidney mitochondria in relation to the deamidation of glutamine (Crompton, M. & Chappell, J. B.) 35–46
Glutaminase, intramitochondrial location of the isoenzymes of, in pig kidney (Crompton, M., McGivan, J. D. & Chappell, J. B.) 27–34
Glutaminase, phosphate-dependent, transport of glutamine and glutamate in pig kidney mitochondria in relation to the activity of (Crompton, M. & Chappell, J. B.) 35–46
Glutamine, transport of glutamate and, in pig kidney mitochondria in relation to the deamidation of glutamine (Crompton, M. & Chappell, J. B.) 35–46
γ-Glutamylmethylamide, *see* N^7-Methylglutamine
Glutathione (oxidized) reductase, interrelationship between, glutathione (reduced)–cystine transhydrogenase and, in developing rat small intestine (States, B. & Segal, S.) 623–631
Glutathione (reduced)–cystine transhydrogenase, interrelationship between glutathione (oxidized) reductase and, in developing rat small intestine (States, B. & Segal, S.) 623–631
Glyceraldehyde, interrelationships between adenosine triphosphate concentration, insulin release and the metabolism of, and other exogenous substrates by isolated mouse pancreas islets of Langerhans (Ashcroft, S. J. H., Weerasinghe, L. C. C. & Randle, P. J.) 223–231
Glyceride lipases, activities of, in nerve endings of guinea-pig brain and their stimulation by noradrenaline 5-hydroxytryptamine and adrenaline (Vyvoda, O. S. & Rowe, C. E.) 233–248
Glycerol, effects of dihydroxyacetone and, on the concentrations of adenine nucleotides in perfused rat liver (Woods, H. F. & Krebs, H. A.) 55–60
Glycerol 3-phosphate, effect of loading with glycerol on the concentration of, in perfused rat liver (Woods, H. F. & Krebs, H. A.) 55–60
sn-Glycerol 3-phosphate, regional and subcellular distribution of the enzymes responsible for the biosynthesis of phosphatidate from, in rat central nervous system (Possmayer, F., Meiners, B. & Mudd, J. B.) 381–394
sn-Glycerol 3-phosphate, relationship between palmitoyl-coenzyme A synthetase activity and the esterification of, by guinea-pig small-intestine mucosa microsomal fraction (Brindley, D. N.) 707–715
sn-Glycerol 3-phosphate, relationship between palmitoyl-coenzyme A synthetase activity and the esterification of, in rat liver mitochondria (Sánchez, M., Nicholls, D. G. & Brindley, D. N.) 697–706
Glycine, formation of, from acetate during growth of *Pseudomonas* AM1 on methanol (Dunstan, P. M. & Anthony, C.) 797–801
Glycogen, changes in the concentration of, in liver of the newborn rat immediately after birth (Snell, K. & Walker, D. G.) 739–752
Glycogen, effects of insulin on the biosynthesis of protein by perfused hearts from normal and insulin-deficient rats after depletion of glucose, glucose 6-phosphate and (Chain, E. B. & Sender, P. M.) 593–601
Glycolipophosphoprotein (vitellogenin), biosynthesis and secretion of, by liver slices from oestrogen-treated *Xenopus laevis* (Merry, A. H., Dolphin, P. J., Munday, K. A. & Akhtar, M.) 459–463
Glycolysis, degradation of enzymes involved in, in rat small intestine during starvation (Jones, G. M. & Mayer, R. J.) 657–661
Glycolysis, effects of calcium ions on the activities of enzymes involved in, in various vertebrate and invertebrate muscles (Vaughan, H., Thornton, S. D. & Newsholme, E. A.) 527–535
Glycoprotein, turnover of protein and, in rabbit kidney-cortex brush borders *in vivo* (Quirk, S. J., Byrne, J. & Robinson, G. B.) 501–508
Glycoproteins, lysosomal, isolation and characterization of a rat kidney rough microsomal fraction enriched in glycoproteins considered to be precursors of (Goldstone, A., Koenig, H., Nayyar, R., Hughes, C. & Lu, C. Y.) 259–266
Glycoproteins, lysosomal, nascent, kidney, rat, physicochemical modifications of, during transport from the rough endoplasmic reticulum through the Golgi apparatus (Goldstone, A. & Koenig, H.) 267–282
Glycoproteins, plasma, mouse, foetal, developmental changes in the microheterogeneity of (Gustine, D. L. & Zimmerman, E. F.) 541–551
Glycosaminoglycans, sulphated, metabolism of, in cultured skin fibroblasts from a human patient with Hurler's syndrome (Germinario, R. J., Kahlenberg, A. & Pinsky, L.) 395–402
Glyoxylate, role of, in the regulation of a nicotinamide–adenine dinucleotide phosphate-linked isoenzyme of isocitrate dehydrogenase from *Acinetobacter lwoffi* (Self, C. H., Parker, M. G. & Weitzman, P. D. J.) 215–221
Golgi apparatus, kidney, rat, physicochemical modifications of nascent lysosomal acid hydrolases during transport from the rough endoplasmic reticulum through (Goldstone, A. & Koenig, H.) 267–282
Gonadectomy, *see* Castration
Granulation tissue, rat, experimentally induced, amino acid metabolism in slices of (Aalto, M., Lampiaho, K., Pikkarainen, J. & Kulonen, E.) 663–671
Growth, relationship between rate of, and glucose metabolism in *Pseudomonas aeruginosa* 2F32 (Ng, F. M.-W. & Dawes, E. A.) 129–140

Heart muscle, diminished protein biosynthesis in cell-free systems from skeletal muscle and, from polymyopathic hamsters (Bester, A. J. & Gevers, W.) 193–201
Heart muscle, rat, effects of calcium ions on the activities of glycolytic enzymes in, and various other muscles (Vaughan, H., Thornton, S. D. & Newsholme, E. A.) 527–535
Heart, rat, perfused, effects of insulin on the biosynthesis of protein in in the presence of glucose and after depletion of glucose, glucose 6-phosphate and glycogen, in, from normal and insulin-deficient animals (Chain, E. B. & Sender, P. M.) 593–601
Heart, rat, perfused, Langendorff, effects of insulin on the rate of protein biosynthesis in (Sender, P. M. & Garlick, P. J.) 603–608
Hepatectomy, partial, uptake of orotate and thymidine by regenerating rat liver after (Ord, M. G. & Stocken, L. A.) 47–54
Hexokinase, degradation of, and other glycolytic enzymes in rat small intestine during starvation (Jones, G. M. & Mayer, R. J.) 657–661
Hexokinase, effects of calcium ions on the activities of, and other glycolytic enzymes in various vertebrate and invertebrate muscles (Vaughan, H., Thornton, S. D. & Newsholme, E. A.) 527–535
Hexokinase, effects of glucose and glucose analogues on the subcellular distribution of, in rat small-intestinal epithelial cells (Jones, G. M. & Mayer, R. J.) 125–128
Histamine, effects of, and other agents on the turnover of protein-bound serine phosphate in respiring slices of guinea-pig cerebral cortex (Reddington, M., Rodnight, R. & Williams, M.) 475–482
Histidine ammonia-lyase, regulation of the activities of, and other enzymes involved in the pathway for the degradation of L-histidine to L-glutamate in *Pseudomonas testosteroni* (Coote, J. G. & Hassall, H.) 423–433
L-Histidine, degradation of imidazol-5-yl-L-lactate, imidazol-5-ylpropionate and, by *Pseudomonas testosteroni* (Coote, J. G. & Hassall, H.) 409–422
L-Histidine, regulation of the activities of the enzymes degrading imidazol-5-yl-L-lactate, imidazol-5-yl-propionate and, in *Pseudomonas testosteroni* (Coote, J. G. & Hassall, H.) 423–433
Hurler's syndrome, disorder in the metabolism of hyaluronate in cultured skin fibroblasts from a human patient with (Germinario, R. J., Kahlenberg, A. & Pinsky, L.) 403–408
Hurler's syndrome, metabolism of sulphated glycosaminoglycans in cultured skin fibroblasts from a human patient with (Germinario, R. J., Kahlenberg, A. & Pinsky, L.) 395–402
Hyaluronate, disorder in the metabolism of, in cultured skin fibroblasts from a human patient with Hurler's syndrome (Germinario, R. J., Kahlenberg, A. & Pinsky, L.) 403–408
Hydrogen ions, stoicheiometry of the symport of lactose and, across the plasma membrane of *Escherichia coli* (West, I. C. & Mitchell, P.) 587–592
Hydrogen ions, stoicheiometry of the translocation of, by the nicotinamide–adenine dinucleotide (phosphate) transhydrogenase of rat liver mitochondria (Moyle, K. & Mitchell, P.) 571–585
Hydrolases, acid, lysosomal, isolation and characterization of a rat kidney rough microsomal fraction that is enriched in (Goldstone, A., Koenig, H., Nayyar, R., Hughes, C. & Lu, C. Y.) 259–266
Hydrolases, acid, lysosomal, nascent, kidney, rat, physicochemical modifications of, during transport from the rough endoplasmic reticulum through the Golgi apparatus (Goldstone, A. & Koenig, H.) 267–282
3β-Hydroxy steroid dehydrogenase, activities of, and other enzymes involved in steroid biosynthesis and cholesteryl ester metabolism in rabbit ovary interstitial tissue and corpora lutea (Flint, A. P. F. & Armstrong, D. T.) 301–311
17β-Hydroxy-5α-androstan-3-one, effects of cyproterone and cyproterone acetate on the dynamics of the uptake and metabolism of, and other androgens by human prostate gland *in vitro* (Giorgi, E. P., Shirley, I. M., Grant, J. K. & Stewart, J. C.) 465–474
3-Hydroxybutyrate, role of acetate as an intermediate during growth of *Pseudomonas* AM 1 on C_1 compounds, ethanol and (Dunstan, P. M. & Anthony, C.) 797–801
20α-Hydroxypregn-4-en-3-one, role of progesterone and, in the control of cholesteryl ester biosynthesis in rabbit ovary interstitial tissue (Flint, A. P. F., Grinwich, D. L. & Armstrong, D. T.) 313–321
Hydroxyspheroidene, inhibitory effect of nicotine on the biosynthesis of spheroidene and, in two *Rhodopseudomonas* species (Singh, R. K., Ben-Aziz, A., Britton, G. & Goodwin, T. W.) 649–652
5-Hydroxytryptamine, effects of, and other agents on the turnover of protein-bound serine phosphate in respiring slices of guinea-pig cerebral cortex (Reddington, M., Rodnight, R. & Williams, M.) 475–482
5-Hydroxytryptamine, stimulation by, of glyceride lipases in nerve endings of guinea-pig brain (Vyvoda, O. S. & Rowe, C. E.) 233–248
Hypophysis, pig, subcellular organization of neurophysins, oxytocin, [8-lysine]-vasopressin and adenosine triphosphatase in the posterior lobe of (Pickup, J. C., Johnston, C. I., Nakamura, S., Uttenthal, L. O. & Hope, D. B.) 361–371

α-L-Iduronidase, effect of a crude urine corrective-factor preparation containing, on the metabolism of hyaluronate in cultured skin fibroblasts from a human patient with Hurler's syndrome (Germinario, R. J., Kahlenberg, A. & Pinsky, L.) 403–408
Imidazol-5-yl-L-lactate, degradation of L-histidine, imidazol-5-ylpropionate and, by *Pseudomonas testosteroni* (Coote, J. G. & Hassall, H.) 409–422
Imidazol-5-yl-L-lactate, regulation of the activities of the enzymes degrading L-histidine, imidazol-5-ylpropionate and, in *Pseudomonas testosteroni* (Coote, J. G. & Hassall, H.) 423–433
Imidazol-5-ylpropionate, degradation of L-histidine, imidazol-5-yl-L-lactate and, by *Pseudomonas testosteroni* (Coote, J. G. & Hassall, H.) 409–422
Imidazol-5-ylpropionate, regulation of the activities of the enzymes degrading L-histidine, imidazol-5-yl-L-lactate and, in *Pseudomonas testosteroni* (Coote, J. G. & Hassall, H.) 423–433
Insulin, effect of treatment with, on the activity of acetyl-coenzyme A carboxylase in rat epididymal tissue *in vitro* (Halestrap, A. P. & Denton, R. M.) 509–517

Insulin, effect of treatment with, on the concentrations of free amino acids in rat testes (Mushahwar, I. K. & Koeppe, R. E.) 353–359
Insulin, effects of glucagon and, on the concentration of adenosine 3′:5′-cyclic monophosphate in an organ culture of rat liver (Siddle, K., Kane-Maguire, B. & Campbell, A. K.) 765–773
Insulin, effects of glucose, noradrenaline and, on lipolysis and on the concentrations of adenosine 3′:5′-cyclic monophosphate and adenosine triphosphate in rat epididymal adipose tissue (Knight, B. L. & Iliffe, J.) 77–82
Insulin, effects of iodoacetamide on the stimulation by glucose of the release of, by isolated mouse pancreas islets of Langerhans (Hellman, B., Idahl, L.-Å., Lernmark, Å., Sehlin, J. & Täljedal, I.-B.) 775–789
Insulin, effects of, on the biosynthesis of protein by perfused hearts from normal and insulin-deficient rats in the presence of glucose and after depletion of glucose, glucose 6-phosphate and glycogen (Chain, E. B. & Sender, P. M.) 593–601
Insulin, effects of, on the rate of protein biosynthesis in the Langendorff-perfused rat heart (Sender, P. M. & Garlick P. J.) 603–608
Insulin, interrelationships between metabolism, adenosine triphosphate concentration and the release of, in isolated mouse pancreas islets of Langerhans (Ashcroft, S. J. H., Weerasinghe, L. C. C. & Randle, P. J.) 223–231
Interstitial tissue, ovary, rabbit, activities of enzymes involved in steroid biosynthesis and cholesteryl ester metabolism in, and corpora lutea (Flint, A. P. F. & Armstrong, D. T.) 301–311
Interstitial tissue, ovary, rabbit, control of cholesteryl ester biosynthesis in (Flint, A. P. F., Grinwich, D. L. & Armstrong, D. T.) 313–321
Intestine, small, guinea-pig, relationship between palmitoyl-coenzyme A synthetase activity and the esterification of *sn*-glycerol 3-phosphate by the microsomal fraction from the mucosa of (Brindley, D. N.) 707–715
Intestine, small, rat, degradation of enzymes involved in the metabolism of glucose in, during starvation (Jones, G. M. & Mayer, R. J.) 657–661
Intestine, small, rat, developing, interrelationship between glutathione (reduced)–cystine transhydrogenase and glutathione (oxidized) reductase in (States, B. & Segal, S.) 623–631
Intestine, small, rat, effects of glucose and glucose analogues on the subcellular distribution of hexokinase in epithelial cells of (Jones, G. M. & Mayer, R. J.) 125–128
Iodoacetamide, effects of, on the stimulation by glucose of the release of insulin by isolated mouse pancreas islets of Langerhans (Hellman, B., Idahl, L.-Å., Lernmark, Å., Sehlin, J. & Täljedal, I.-B.) 775–789
Iron, lack of effect of cobalt ions on the metabolism of, in a cobalt ion-resistant strain of *Neurospora crassa* (Venkateswerlu, G. & Sivarama Sastry, K.) 673–680
Islets of Langerhans, pancreas, mouse, isolated, effects of iodoacetamide on the stimulation by glucose of the release of insulin by (Hellman, B., Idahl, L.-Å., Lernmark, Å., Sehlin, J. & Täljedal, I.-B.) 775–789
Islets of Langerhans, pancreas, mouse, isolated, interrelationships of metabolism, adenosine triphosphate concentration and insulin release in (Ashcroft, S. J. H., Weerasinghe, L. C. C. & Randle, P. J.) 223–231
[1-^{14}C]Isobutyrate, incorporation of [1-^{14}C]acetate, [1-^{14}C]propionate and, into 6-*O*-methylglucose-containing lipopolysaccharides by whole cells of *Mycobacterium phlei* A.T.C.C. 356 *in vivo* (Narumi, K., Keller, J. M. & Ballou, C. E.) 329–340
Isocitrate dehydrogenase, mitochondrial, liver, rat, absolute specificity of, for nicotinamide–adenine dinucleotide phosphate (Moyle, J. & Mitchell, P.) 571–585
Isocitrate dehydrogenase, regulation of a nicotinamide–adenine dinucleotide phosphate-linked isoenzyme of, from *Acinetobacter lwoffi* (Self, C. H., Parker, M. G. & Weitzman, P. D. J.) 215–221
Isoniazid, acetylation of, by *N*-acetyltransferases of various tissues of the rabbit (Hearse, D. J. & Weber, W. W.) 519–526

Kidney cortex, rabbit, turnover of protein and glycoprotein in the brush borders of, *in vivo* (Quirk, S. J., Byrne, J. & Robinson, G. B.) 501–508
Kidney cortex, rat, exchange of malate between cytosol and mitochondria in (Rognstadt, R. & Katz, J.) 349–352
Kidney, pig, intramitochondrial location of the glutaminase isoenzymes in (Crompton, M., McGivan, J. D. & Chappell, J. B.) 27–34
Kidney, pig, occurrence of intermediates in the oxidative degradation of octanoate by mitochondrial extracts from (Stewart, H. B., Tubbs, P. K. & Stanley, K. K.) 61–76
Kidney, pig, transport of glutamine and glutamate in mitochondria from, in relation to the deamidation of glutamine (Crompton, M. & Chappell, J. B.) 35–46
Kidney, rat, inhibition by methylglyoxal bis(guanylhydrazone) of the biosynthesis of spermidine in (Pegg, A. E.) 537–540
Kidney, rat, isolation and characterization of a rough microsomal fraction from, that is enriched in lysosomal enzymes (Goldstone, A., Koenig, H., Nayyar, R., Hughes, C. & Lu, C. Y.) 259–266
Kidney, rat, physicochemical modifications of nascent lysosomal acid hydrolases during transport from the rough endoplasmic reticulum through the Golgi apparatus of (Goldstone, A. & Koenig, H.) 267–282

Lactate, changes in the concentrations of glucose and, in plasma of the newborn rat immediately after birth (Snell, K. & Walker, D. G.) 739–752
Lactate, concentrations of free of amino acids and, in the testes of various species (Mushahwar, I. K. & Koeppe, R. E.) 353–359
Lactate, effects of the injection of crotonate on the redox state and on gluconeogenesis from, in rat liver *in vivo* (Hawkins, R. A., Houghton, C. R. S. & Williamson, D. H.) 19–25
Lactate/pyruvate concentration ratio, effects of glycerol and dihydroxyacetone on, in perfused rat liver (Woods, H. F. & Krebs, H. A.) 55–60

Lactate/pyruvate concentration ratio, effects of the injection of crotonate on, and the redox state of other redox couples and on gluconeogenesis from lactate in rat liver *in vivo* (Hawkins, R. A., Houghton, C. R. S. & Williamson, D. H.) 19–25

Lactation, biosynthesis of medium-chain fatty acids by the microsomal plus cytosol fraction from rabbit mammary gland during (Strong, C. R., Carey, E. M. & Dils, R.) 121–123

Lactose, stoicheiometry of the symport of protons and, across the plasma membrane of *Escherichia coli* (West, I. C. & Mitchell, P.) 587–592

Leaves, nettle, activity of choline acetyltransferase in (Barlow, R. B. & Dixon, R. O. D.) 15–18

[^{3}H]Leucine, incorporation of inorganic [^{32}P]phosphate and, into vitellogenin by liver slices from oestrogen-treated *Xenopus laevis* (Merry, A. H., Dolphin, P. J., Munday, K. A. & Akhtar, M.) 459–463

Leucine, interrelationships between adenosine triphosphate concentration, insulin release and the metabolism of, and other exogenous substrates by isolated mouse pancreas islets of Langerhans (Ashcroft, S. J. H., Weerasinghe, L. C. C. & Randle, P. J.) 223–231

Linoleate, role of food particles as a site for the hydrogenation of, in sheep rumen (Harfoot, C. G., Noble, R. C. & Moore, J. H.) 829–832

Lipase, clearing-factor, effect of cycloheximide on the activity of, in rat epididymal adipose tissue *in vitro* (Cryer, A., Foster, B., Wing, D. R. & Robinson, D. S.) 833–836

Lipase, clearing-factor, relationship between cellularity and the activity of, in the perirenal and perigenital adipose tissue of the genetically obese Zucker rat (de Gasquet, P., Péquignot, E., Lemonnier, D. & Alexiu, A.) 633–635

Lipid droplets, liver, rat, isolation, morphology and composition of (DiAugustine, R. P., Schaefer, J.-M. & Fouts, J. R.) 323–327

Lipids, regional and subcellular distribution of the enzymes responsible for the biosynthesis *de novo* of, in rat central nervous system (Possmayer, F., Meiners, B. & Mudd, J. B.) 381–394

Lipolysis, effects of glucose, insulin and noradrenaline on, and on the concentrations of adenosine 3′:5′-cyclic monophosphate and adenosine triphosphate in rat epididymal adipose tissue (Knight, B. L. & Iliffe, J.) 77–82

Lipopolysaccharides, 6-*O*-methylglucose-containing, incorporation of [^{14}C]acyl groups into, by whole cells of *Mycobacterium phlei* A.T.C.C. 356 *in vivo* (Narumi, K., Keller, J. M. & Ballou, C. E.) 329–340

Lipoprotein lipase, *see* Lipase, clearing-factor

Liver, determination of phenethylamine and related compounds in the brain and, of rats with phenylketonuria-like characteristics induced by the injection of *p*-chlorophenylalanine (Edwards, D. J. & Blau, K.) 95–100

Liver, guinea-pig, control of the biosynthesis of phosphoenolpyruvate in mitochondria from (Wilson, M. B.) 553–557

Liver, mouse, inhibitory effects of steroids on the formation of glucoside conjugates by a microsomal preparation from (Gessner, T., Jacknowitz, A. & Vollmer, C. A.) 249–258

Liver, ox, occurrence of intermediates in the oxidative degradation of octanoate by mitochondrial extracts from (Stewart, H. B., Tubbs, P. K. & Stanley, K. K.) 61–76

Liver, rabbit, characterization and significance of *N*-acetyltransferases in, and other tissues (Hearse, D. J. & Weber, W. W.) 519–526

Liver, rat, activation by cortisone of acid α-glucosidase in lysosomes of (Bourne, E. J., Clarke, K., Pridham, J. B. & Rowe, J. J. M.) 435–438

Liver, rat, activities of alkaline ribonuclease and alkaline phosphodiesterase in plasma membranes of (Prospero, T. D., Burge, M. L. E., Norris, K. A., Hinton, R. H. & Reid, E.) 449–458

Liver, rat, activities, substrate specificities and subcellular distributions of 3-oxoacyl-coenzyme A thiolases in, and other animal tissues (Middleton, B.) 717–730

Liver, rat, changes in the glycogen content of, immediately after birth (Snell, K. & Walker, D. G.) 739–752

Liver, rat, effect of carbon monoxide on the nature of the accumulated 4,4-dimethyl sterol precursors of cholesterol during its biosynthesis from mevalonate by a preparation of (Gibbons, G. F. & Mitropoulos, K. A.) 439–448

Liver, rat, effects of acute and prolonged treatment with ethanol on the concentrations of coenzyme A, carnitine and their derivatives in (Kondrup, J. & Grunnet, N.) 373–379

Liver, rat, effects of glucagon and insulin on the concentration of adenosine 3′:5′-cyclic monophosphate in an organ culture of (Siddle, K., Kane-Maguire, B. & Campbell, A. K.) 765–773

Liver, rat, effects of the injection of crotonate on the redox state and on gluconeogenesis from lactate in, *in vivo* (Hawkins, R. A., Houghton, C. R. S. & Williamson, D. H.) 19–25

Liver, rat, inhibition by methylglyoxal bis(guanylhydrazone) of the biosynthesis of spermidine in (Pegg, A. E.) 537–540

Liver, rat, isolation, morphology and composition of lipid droplets from (DiAugustine, R. P., Schaefer, J.-M. & Fouts, J. R.) 323–327

Liver, rat, normal and regenerating, uptake of orotate and thymidine by (Ord, M. G. & Stocken, L. A.) 47–54

Liver, rat, perfused, effects of glycerol and dihydroxyacetone on the concentrations of adenine nucleotides in (Woods, H. F. & Krebs, H. A.) 55–60

Liver, rat, relationship between palmitoyl-coenzyme A synthetase activity and the esterification of *sn*-glycerol 3-phosphate in mitochondria from (Sánchez, M., Nicholls, D. G. & Brindley, D. N.) 697–706

Liver, rat, role of membrane phospholipids in the interaction of ribosomes with the endoplasmic-reticulum membrane of (Jothy, S., Tay, S. & Simpkins, H.) 637–640

Liver, rat, stoicheiometry of the translocation of protons by the nicotinamide–adenine dinucleotide (phosphate) transhydrogenase of mitochondria from (Moyle, J. & Mitchell, P.) 571–585

Liver, rat, studies of nuclei separated from, by zonal centrifugation after treatment of the animals with thioacetamide (Gonzalez-Mujica, F. & Mathias, A. P.) 163–183

Liver, *Xenopus laevis*, oestrogen-treated, biosynthesis and secretion of vitellogenin by slices of (Merry, A. H., Dolphin, S. J., Munday, K. A. & Akhtar, M.) 459–463
Locust (*Locusta migratoria*), 3,4-dihydroxyphenylalanine (dopa) decarboxylase activity in the nervous system of, and other arthropods (Murdock, L. L., Wirtz, R. A. & Köhler, G.) 681–688
Locusta migratoria, see Locust
Luteinizing hormone, role of, in the control of cholesteryl ester biosynthesis in rabbit ovary interstitial tissue and in luteinized rat ovary (Flint, A. P. F., Grinwich, D. L. & Armstrong, D. T.) 313–321
Lymphocytes, human, phytohaemagglutinin-stimulated control by putrescine and spermidine of the activity of ornithine decarboxylase in (Kay, J. E. & Lindsay, V. J.) 791–796
Lymphocytes, rat, inhibition by complement of the concanavalin A-stimulated incorporation of [^{3}H]uridine into ribonucleic acid of (Milthorpe, P. & Forsdyke, D. R.) 803–812
[^{3}H]Lysine, incorporation of, into protein and glycoprotein in rabbit kidney-cortex brush borders *in vivo* (Quirk, S. J., Byrne, J. & Robinson, G. B.) 501–508
Lysine residues, hydroxylation of, of collagen biosynthesized in bone of rachitic rats and chicks (Barnes, M. J., Constable, B. J., Morton, L. F. & Kodicek, E.) 113–115
Lysosomes, heterogeneous distribution of acid hydrolases in subgroups of, from a homogeneous population of cultured Chinese-hamster ovary fibroblasts (Milsom, J. P. & Wynn, C. H.) 493–500
Lysosomes, isolation and characterization of a rat kidney rough microsomal fraction that is enriched in enzymes typical of (Goldstone, A., Koenig, H., Nayyar, R., Hughes, C. & Lu, C. Y.) 259–266
Lysosomes, kidney, rat, physicochemical modifications of nascent acid hydrolases of, during transport from the rough endoplasmic reticulum through the Golgi apparatus (Goldstone, A. & Koenig, H.) 267–282
Lysosomes, liver, rat, activation by cortisone of acid α-glucosidase in (Bourne, E. J., Clarke, K., Pridham, J. B. & Rowe, J. J. M.) 435–438

Magnesium ions, function of cell-wall and membrane teichoic acids in maintaining the correct ionic environment for enzyme systems of the membrane of *Bacillus licheniformis* A.T.C.C. 9945 that are dependent on (Hughes, A. H., Hancock, I. C. & Baddiley, J.) 83–93
Malate, exchange of, between cytosol and mitochondria in rat kidney cortex (Rognstadt, R. & Katz, J.) 349–352
Mammary gland, rabbit, lactating, biosynthesis of medium-chain fatty acids by the microsomal plus cytosol fraction from (Strong, C. R., Carey, E. M. & Dils, R.) 121–123
Mannose, interrelationships between adenosine triphosphate concentration, insulin release and the metabolism of, and other exogenous substrates by isolated mouse pancreas islets of Langerhans (Ashcroft, S. J. H., Weerasinghe, L. C. C. & Randle, P. J.) 223–231
Membrane, endoplasmic-reticulum, liver, rat, role of membrane phospholipids in the interaction of ribosomes with (Jothy, S., Tay, S. & Simpkins, H.) 637–640
Membrane, function of the teichoic acids of the cell wall and, in maintaining the correct ionic environment for cation-dependent enzyme systems of the membrane of *Bacillus licheniformis* A.T.C.C. 9945 (Hughes, A. H., Hancock, I. C. & Baddiley, J.) 83–93
Membrane, inner, mitochondrial, kidney, pig, transport of glutamine and glutamate across, in relation to the deamidation of glutamine (Crompton, M. & Chappell, J. B.) 35–46
Membrane, lysosomal, liver, rat, possible involvement of, in the activation by cortisone of acid α-glucosidase (Bourne, E. J., Clarke, K., Pridham, J. B. & Rowe, J. J. M.) 435–438
Membrane, plasma, stoicheiometry of the symport of lactose and protons across, of *Escherichia coli* (West, I. C. & Mitchell, P.) 587–592
Membranes, brush-border, kidney-cortex, rabbit, turnover of protein and glycoprotein in, *in vivo* (Quirk, S. J., Byrne, J. & Robinson, G. B.) 501–508
Membranes, microsomal and synaptosomal, cerebral-cortex, ox, stimulation by adenosine 3′:5′-cyclic monophosphate of the intrinsic protein kinase activity in preparations of (Weller, M. & Rodnight, R.) 483–492
Membranes, plasma, effect of 6-*N*,2′-*O*-dibutyryladenosine 3′:5′-cyclic monophosphate plus testosterone on the phosphorylation of high-molecular-weight proteins of, in cultured Chinese-hamster ovary cells (Rieber, M. & Bacalao, J.) 641–644
Membranes, plasma, liver, rat, activities of alkaline ribonuclease and alkaline phosphodiesterase in (Prospero, T. D., Burge, M. L. E., Norris, K. A., Hinton, R. H. & Reid, E.) 449–458
Membranes, reconstitution of the energy-linked nicotinamide–adenine dinucleotide (phosphate) transhydrogenase activity in, from a mutant strain of *Escherichia coli* K12 lacking magnesium ion- or calcium ion-stimulated adenosine triphosphatase (Cox, G. B., Gibson, F., McCann, L. M., Butlin, J. D. & Crane, F. L.) 689–695
Metal ions, interrelationships in trace-element metabolism in toxicities of, towards a cobalt ion-resistant strain of *Neurospora crassa* (Venkateswerlu, G. & Sivarama Sastry, K.) 673–680
Methanol, role of acetate as an intermediate during growth of *Pseudomonas* AM1 on ethanol, 3-hydroxybutyrate and (Dunstan, P. M. & Anthony, C.) 797–801
Methyl α-glucoside, regulation of the transport of glucose and, in *Pseudomonas aeruginosa* 2F32 (Midgley, M. & Dawes, E. A.) 141–154
Methylamine, metabolism of, in excised shoot tips of the tea plant (Suzuki, T.) 753–763
6-*O*-Methylglucose, incorporation of [^{14}C]acyl groups into lipopolysaccharides containing, by whole cells of *Mycobacterium phlei* A.T.C.C. 356 *in vivo* (Narumi, K., Keller, J. M. & Ballou, C. E.) 329–340
N^7-Methylglutamine, formation of, from methylamine in excised shoot tips of the tea plant (Suzuki, T.) 753–763
Methylglyoxal bis(guanylhydrazone), inhibition by, of the biosynthesis of spermidine in rat liver and kidney (Pegg, A. E.) 537–540
Methylotrophic bacteria, obligate and facultative, metabolism of trimethylamine in (Colby, J. & Zatman, L. J.) 101–112

Mevalonate, effect of carbon monoxide on the nature of the accumulated 4,4-dimethyl sterol precursors of cholesterol during its biosynthesis from, by a rat liver preparation (Gibbons, G. F. & Mitropoulos, K. A.) 439–448
Microsomal fraction, adrenal-gland, rat, effects of various hormonal treatments on the activity of the C_{19} steroid 5α-reductase of (Maynard, P. V. & Cameron, E. H. D.) 293–300
Microsomal fraction, adrenal-gland, rat, metabolism of androst-4-ene-3,17-dione by the C_{19} steroid α-reductase of (Maynard, P. V. & Cameron, E. H. D.) 283–291
Microsomal fraction, biosynthesis of medium-chain fatty acids by the combined cytosol and, from lactating rabbit mammary gland (Strong, C. R., Carey, E. M. & Dils, R.) 121–123
Microsomal fraction, central-nervous-system, rat, localization of the enzymes responsible for the biosynthesis of phosphatidate *de novo* in (Possmayer, F., Meiners, N. & Mudd, J. B.) 381–394
Microsomal fraction, cerebral-cortex, ox, stimulation by adenosine 3′:5′-cyclic monophosphate of the intrinsic protein kinase activity in (Weller, M. & Rodnight, R.) 483–492
Microsomal fraction, mucosa, small-intestine, guinea-pig, relationship between palmitoyl-coenzyme A synthetase activity and the esterification of *sn*-glycerol 3-phosphate by (Brindley, D. N.) 707–715
Microsomal fraction, rough, kidney, rat, isolation and characterization of, that is enriched in lysosomal enzymes (Goldstone, A., Koenig, H., Nayyar, R., Hughes, C. & Lu, C. Y.) 259–266
Microsomal fraction, rough, kidney, rat, physicochemical modifications of nascent lysosomal acid hydrolases during transport from, through the Golgi apparatus (Goldstone, A. & Koenig, H.) 267–282
Microsomal preparation, liver, mouse, inhibitory effects of steroids on the formation of glucoside conjugates by (Gessner, T., Jacknowitz, A. & Vollmer, C. A.) 249–258
Microsomal preparation, seminal-vesicle, ox, inhibition by 7-oxa- and 5-oxa-prostaglandin analogues of the biosynthesis of prostaglandins E_2 and $F_{2\alpha}$ from arachidonate by (McDonald-Gibson, R. G., Flack, J. D. & Ramwell, P. W.) 117–120
Mitochondria, activities and substrate specificities of 3-oxoacyl-coenzyme A thiolases in cytosol and, of various animal tissues (Middleton, B.) 717–730
Mitochondria, brain, rat, changes in the activities of 3-oxoacyl-coenzyme A thiolases in, and cytosol during development (Middleton, B.) 731–737
Mitochondria, brain, rat, regulation of pyruvate metabolism via pyruvate carboxylase in (Patel, M. S. & Tilghman, S. M.) 185–192
Mitochondria, kidney-cortex, rat, exchange of malate between, and cytosol (Rognstad, R. & Katz, J.) 349–352
Mitochondria, kidney, pig, location of the glutaminase isoenzymes in the intramitochondrial compartment of (Crompton, M., McGivan, J. D. & Chappell, J. B.) 27–34
Mitochondria, kidney, pig, occurrence of intermediates in the oxidative degradation of octanoate by extracts of (Stewart, H. B., Tubbs, P. K. & Stanley, K. K.) 61–76
Mitochondria, kidney, pig, transport of glutamine and glutamate in, in relation to the deamidation of glutamine (Crompton, M. & Chappell, J. B.) 35–46
Mitochondria, liver, guinea-pig, control of the biosynthesis of phosphoenolpyruvate in (Wilson, M. B.) 553–557
Mitochondria, liver, ox, occurrence of intermediates in the oxidative degradation of octanoate by extracts of (Stewart, H. B., Tubbs, P. K. & Stanley, K. K.) 61–76
Mitochondria, liver, rat, relationship between palmitoyl-coenzyme A synthetase activity and the esterification of *sn*-glycerol 3-phosphate in (Sánchez, M., Nicholls, D. G. & Brindley, D. N.) 697–706
Mitochondria, liver, rat, stoicheiometry of the translocation of protons by the nicotinamide–adenine dinucleotide (phosphate) transhydrogenase of (Moyle, J. & Mitchell, P.) 571–585
Monoglyceride lipase, activities of, and other glyceride lipases in nerve endings of guinea-pig brain and their stimulation by noradrenaline, 5-hydroxytryptamine and adrenaline (Vyvoda, O. S. & Rowe, C. E.) 233–248
Mucosa, small-intestine, guinea-pig, relationship between palmitoyl-coenzyme A synthetase activity and the esterification of *sn*-glycerol 3-phosphate by the microsomal fraction from (Brindley, D. N.) 707–715
Muscle, flight, insect, effects of calcium ions on the activities of glycolytic enzymes in, and various other muscles (Vaughan, H., Thornton, S. D. & Newsholme, E. A.) 527–535
Muscle, heart, diminished protein biosynthesis in cell-free systems from skeletal muscle and, from polymyopathic hamsters (Bester, A. J. & Gevers, W.) 193–201
Muscle, heart, rat, effects of calcium ions on the activities of glycolytic enzymes in, and various other muscles (Vaughan, H., Thornton, S. D. & Newsholme, E. A.) 527–535
Muscle, skeletal, diminished protein biosynthesis in cell-free systems from heart muscle and, from polymyopathic hamsters (Bester, A. J. & Gevers, W.) 193–201
Muscle, skeletal, evidence for the presence of defective transfer ribonucleic acid and its inhibitory effect on protein biosynthesis in, from polymyopathic hamsters (Bester, A. J. & Gevers, W.) 203–214
Muscle, skeletal, vertebrate, effects of calcium ions on the activities of glycolytic enzymes in, and various other muscles (Vaughan, H., Thornton, S. D. & Newsholme, E. A.) 527–535
Mycobacterium phlei A.T.C.C. 356, incorporation of [^{14}C]acyl groups into 6-*O*-methylglucose-containing lipopolysaccharides by whole cells of, *in vivo* (Narumi, K., Keller, J. M. & Ballou, C. E.) 329–340
Myofibrils, muscle, heart, rat, effect of insulin on the rate of biosynthesis of the proteins of (Sender, P. M. & Garlick, P. J.) 603–608

Nerve endings, brain, guinea-pig, activities of glyceride lipases in, and their stimulation by noradrenaline, 5-hydroxytryptamine and adrenaline (Vyvoda, O. S. & Rowe, C. E.) 233–248
Nerve, peripheral, crab, absence of protein kinase activity from a membrane preparation from (Weller, M. & Rodnight, R.) 483–492

Nervous system, central, rat, regional and subcellular distribution of the enzymes responsible for the biosynthesis of phosphatidate *de novo* in (Possmayer, F., Meiners, B. & Mudd, H. B.) 381–394
Nervous system, locust, 3,4-dihydroxyphenylalanine (dopa) decarboxylase activity in, and in that of other arthropods (Murdock, L. L., Wirtz, R. A. & Köhler, G.) 681–688
Nettle (*Urtica dioica*), activity of choline acetyltransferase in (Barlow, R. B. & Dixon, R. O. D.) 15–18
Neurophysins, subcellular organization of adenosine triphosphatase, oxytocin, [8-lysine]-vasopressin and, in pig posterior pituitary gland (Pickup, J. C., Johnston, C. I., Nakamura, S., Uttenthal, L. O. & Hope, D. B.) 361–371
Neurosecretory granules, distribution of neurophysins, oxytocin, [8-lysine]-vasopressin and adenosine triphosphatase between two populations of, from pig posterior pituitary gland (Pickup, J. C., Johnston, C. I., Nakamura, S., Uttenthal, L. O. & Hope, D. B.) 361–371
Neurospora crassa, interrelationships in trace-element metabolism in toxicities of metal ions towards a cobalt ion-resistant strain of (Venkateswerlu, G. & Sivarama Sastry, K.) 673–680
Neurotropic drugs, effects of, on the biosynthesis and release of [^{14}C]acetylcholine in rat cerebral-cortex slices (Grewaal, D. S. & Quastel, J. H.) 1–14
Nickel ions, interrelationships in trace-element metabolism in toxicities of, and other metal ions towards a cobalt ion-resistant strain of *Neurospora crassa* (Venkateswerlu, G. & Sivarama Sastry, K.) 673–680
Nicotinamide–adenine dinucleotide, effects of the injection of crotonate on the redox state of, and other redox couples and on gluconeogenesis from lactate in rat liver *in vivo* (Hawkins, R. A., Houghton, C. R. S. & Williamson, D. H.) 19–25
Nicotinamide–adenine dinucleotide (phosphate) transhydrogenase, energy-linked, reconstitution of the activity of, in membranes from a mutant strain of *Escherichia coli* K12 lacking magnesium ion- or calcium ion-stimulated adenosine triphosphatase (Cox, G. B., Gibson, F., McCann, L. M., Butlin, J. D. & Crane, F. L.) 689–695
Nicotinamide–adenine dinucleotide (phosphate) transhydrogenase, stoicheiometry of the translocation of protons by, of rat liver mitochondria (Moyle, J. & Mitchell, P.) 571–585
Nicotine, inhibitory effect of, on the biosynthesis of spheroidene and hydroxyspheroidene in two *Rhodopseudomonas* species (Singh, R. K., Ben-Aziz, A., Britton, G. & Goodwin, T. W.) 649–652
p-Nitrophenyl glucoside, inhibitory effects of steroids on the formation of, by a mouse liver microsomal preparation (Gessner, T., Jacknowitz, A. & Vollmer, C. A.) 249–258
Noradrenaline, effects of, and other agents on the turnover of protein-bound serine phosphate in respiring slices of guinea-pig cerebral cortex (Reddington, M., Rodnight, R. & Williams, M.) 475–482
Noradrenaline, effects of glucose, insulin and, on lipolysis and on the concentrations of adenosine 3′:5′-cyclic monophosphate and adenosine triphosphate in rat epididymal adipose tissue (Knight, B. L. & Iliffe, J.) 77–82
Noradrenaline, stimulation by, of glyceride lipases in nerve endings of guinea-pig brain (Vyvoda, O. S. & Rowe, C. E.) 233–248
Nuclei, brain, rat, biosynthesis of ribonucleic acid *in vivo* in, subsequently fractionated by zonal centrifugation (Austoker, J., Cox, D. & Mathias, A. P.) 813–819
Nuclei, liver, rat, studies of, separated by zonal centrifugation after treatment of the animals with thioacetamide (Gonzalez-Mujica, F. & Mathias, A. P.) 163–183

Octanoate, biosynthesis of decanoate and, by the microsomal plus cytosol fraction from lactating rabbit mammary gland (Strong, C. R., Carey, E. M. & Dils, R.) 121–123
Octanoate, effect of, on the biosynthesis of phosphoenolpyruvate in guinea-pig liver mitochondria (Wilson, M. B.) 553–557
Octanoate, occurrence of intermediates in the oxidative degradation of, in ox liver and pig kidney mitochondrial extracts (Stewart, H. B., Tubbs, P. K. & Stanley, K. K.) 61–76
Oestradiol-17β, biosynthesis and secretion of vitellogenin by liver slices from *Xenopus laevis* treated with (Merry, A. H., Dolphin, P. J., Munday, K. A. & Akhtar, M.) 459–463
Oestradiol, effects of treatment with corticotrophin, testosterone and, on the activity of microsomal C_{19} steroid 5α-reductase in the adrenal glands of intact and castrated rats (Maynard, P. V. & Cameron, E. H. D.) 293–300
Oestrogen, biosynthesis and secretion of vitellogenin by liver slices from *Xenopus laevis* treated with (Merry, A. H., Dolphin, P. J., Munday, K. A. & Akhtar, M.) 459–463
Ornithine decarboxylase, control by putrescine and spermidine of the activity of, in phytohaemagglutinin-stimulated human lymphocytes (Kay, J. E. & Lindsay, V. J.) 791–796
[^{14}C]Orotate, incorporation of [^{3}H]uridine, [^{14}C]adenosine and, into ribonucleic acid *in vivo* in rat brain nuclei subsequently fractionated by zonal centrifugation (Austoker, J., Cox, D. & Mathias, A. P.) 813–819
Orotate, uptake of thymidine and, by normal and regenerating rat livers (Ord, M. G. & Stocken, L. A.) 47–54
Ovary cells, Chinese-hamster, cultured, effect of 6-*N*,2′-*O*-dibutyryladenosine 3′:5′-cyclic monophosphate plus testosterone on the phosphorylation of high-molecular-weight membrane proteins in (Rieber, M. & Bacalao, J.) 641–644
Ovary fibroblasts, Chinese-hamster, cultured, heterogeneous distribution of acid hydrolases in subgroups of lysosomes from a homogeneous population of (Milsom, J. P. & Wynn, C. H.) 493–500
Ovary, rabbit, activities of enzymes involved in steroid biosynthesis and cholesteryl ester metabolism in interstititial tissue and corpora lutea of (Flint, A. P. F. & Armstrong, D. T.) 301–311
Ovary, rabbit, control of cholesteryl ester biosynthesis in interstitial tissue of (Flint, A. P. F., Grinwich, D. L. & Armstrong, D. T.) 313–321
Ovary, rat, luteinized, control of cholesteryl ester biosynthesis in (Flint, A. P. F., Grinwich, D. L. & Armstrong, D. T.) 313–321

7-Oxa- and 5-oxa-prostaglandin analogues, inhibition by of the biosynthesis of prostaglandins E_2 and $F_{2\alpha}$ from arachidonate by an ox seminal-vesicle microsomal preparation (McDonald-Gibson, R. G., Flack, J. D. & Ramwell, P. W.) 117–120

3-Oxoacyl-coenzyme A thiolases, activities, substrate specificities and subcellular distributions of, in various animal tissues (Middleton, B.) 717–730

3-Oxoacyl-coenzyme A thiolases, changes in the activities of, in rat brain during development (Middleton, B.) 731–737

Oxytocin, subcellular organization of adenosine triphosphatase, neurophysins, [8-lysine]-vasopressin and, in pig posterior pituitary gland (Pickup, J. C., Johnston, C. I., Nakamura, S., Uttenthal, L. O. & Hope, D. B.) 361–371

Palmitate, effect of, on the biosynthesis of phosphoenolpyruvate in guinea-pig liver mitochondria (Wilson, M. B.) 553–557

Palmitoyl-coenzyme A synthetase, relationship between the activity of, and the esterification of *sn*-glycerol 3-phosphate by guinea-pig small-intestine mucosa microsomal fraction (Brindley, D. N.) 707–715

Palmitoyl-coenzyme A synthetase, relationship between the activity of, and the esterification of *sn*-glycerol 3-phosphate in rat liver mitochondria (Sánchez, M., Nicholls, D. G. & Brindley, D. N.) 697–706

Pancreas, mouse, effects of iodoacetamide on the stimulation by glucose of the release of insulin by isolated islets of Langerhans from (Hellman, B., Idahl, L.-Å., Lernmark, Å., Sehlin, J. & Täljedal, I.-B.) 775–789

Pancreas, mouse, interrelationships of metabolism, adenosine triphosphate concentration and insulin release in isolated islets of Langerhans from (Ashcroft, S. J. H., Weerasinghe, L. C. C. & Randle, P. J.) 223–231

Pentose phosphate pathway, chemostat studies on the regulation by citrate of the activities of key enzymes of, and other pathways of glucose metabolism in *Pseudomonas aeruginosa* 2F32 (Ng, F. M.-W. & Dawes, E. A.) 129–140

Phenethylamine, determination of, and related compounds in the brain and liver of rats with phenylketonuria-like characteristics induced by the injection of *p*-chlorophenylalanine (Edwards, D. J. & Blau, K.) 95–100

Phenylketonuria, simulated, determination of phenethylamine and related compounds in the brain and liver of rats with, induced by the injection of *p*-chlorophenylalanine (Edwards, D. J. & Blau, K.) 95–100

Phosphatase, acid, heterogeneous distribution of, and other acid hydrolases in subgroups of lysosomes from a homogeneous population of cultured Chinese-hamster ovary fibroblasts (Milsom, J. P. & Wynn, C. H.) 493–500

[^{32}P]Phosphate, inorganic, incorporation of [^{3}H]leucine and, into vitellogenin by liver slices from oestrogen-treated *Xenopus laevis* (Merry, A. H., Dolphin, P. J., Munday, K. A. & Akhtar, M.) 459–463

Phosphatidate, evidence that *sn*-glycerol 3-phosphate acyltransferase activity is rate-limiting in the biosynthesis of, in rat liver mitochondria (Sánchez, M., Nicholls, D. G. & Brindley, D. N.) 697–706

Phosphatidate, evidence that palmitoyl-coenzyme A synthetase and *sn*-glycerol 3-phosphate acyltransferase activities are rate-limiting in the biosynthesis of, in guinea-pig small-intestine mucosa microsomal fraction (Brindley, D. N.) 707–715

Phosphatidate, regional and subcellular distribution of the enzymes responsible for the biosynthesis *de novo* of, in rat central nervous system (Possmayer, F., Meiners, B. & Mudd, J. B.) 381–394

Phosphodiesterase, alkaline, activities of alkaline ribonuclease and, in rat liver plasma membranes (Prospero, T. D., Burge, M. L. E., Norris, K. A., Hinton, R. H. & Reid, E.) 449–458

Phosphoenolpyruvate, control of the biosynthesis of, in guinea-pig liver mitochondria (Wilson, M. B.) 553–557

Phosphofructokinase, effects of calcium ions on the activities of, and other glycolytic enzymes in various vertebrate and invertebrate muscles (Vaughan, H., Thornton, S. D. & Newsholme, E. A.) 527–535

6-Phosphogluconate dehydrogenase, degradation of, and other glycolytic enzymes in rat small intestine during starvation (Jones, G. M. & Mayer, R. J.) 657–661

Phospholipids, membrane, role of, in the interaction of ribosomes with rat liver endoplasmic-reticulum membrane (Jothy, S., Tay, S. & Simpkins, H.) 637–640

Phosphoprotein, effects of putative neurotransmitters, tetrodotoxin and other agents on the turnover of serine phosphate residues of, in respiring slices of guinea-pig cerebral cortex (Reddington, M., Rodnight, R. & Williams, M.) 475–482

Phosphoserine, *see* Serine phosphate

Phytohaemagglutinin, control by putrescine and spermidine of the activity of ornithine decarboxylase in human lymphocytes stimulated by (Kay, J. E. & Lindsay, V. J.) 791–796

Pituitary gland, posterior, pig, subcellular organization of neurophysins, oxytocin, [8-lysine]-vasopressin and adenosine triphosphatase in (Pickup, J. C., Johnston, C. I., Nakamura, S., Uttenthal, L. O. & Hope, D. B.) 361–371

Plasma membrane, *see* Membrane, plasma

Plasma, mouse, foetal, developmental changes in the microheterogeneity of glycoproteins in (Gustine, D. L. & Zimmerman, E. F.) 541–551

Plasma, rat, changes in the concentration of glucose and other metabolites in, immediately after birth (Snell, K. & Walker, D. G.) 739–752

Plasma, rat, transport of retinoate in (Smith, J. E., Milch, P. O., Muto, Y. & Goodman, DeW.S.) 821–827

Polymyopathy, diminished protein biosynthesis in cell-free systems from heart muscle and skeletal muscle from hamsters with (Bester, A. J. & Gevers, W.) 193–201

Polymyopathy, evidence for the presence of defective transfer ribonucleic acid and its inhibitory effect on protein biosynthesis in skeletal muscle from hamsters with (Bester, A. J. & Gevers, W.) 203–214

Polyribosomes, diminished protein biosynthesis by, in cell-free systems from heart muscle and skeletal muscle from polymyopathic hamsters (Bester, A. J. & Gevers, W.) 193–201

Polyribosomes, evidence for the presence of defective transfer ribonucleic acid and its inhibitory effect on protein biosynthesis by, in cell-free systems from polymyopathic hamsters (Bester, A. J. & Gevers, W.) 203–214
Polysaccharides, lipo-, 6-*O*-methylglucose-containing, incorporation of [^{14}C]acyl groups into, by whole cells of *Mycobacterium phlei* A.T.C.C. 356 *in vivo* (Narumi, K., Keller, J. M. & Ballou, C. E.) 329–340
Polysomes, *see* Polyribosomes
Potassium ions, effects of, on the biosynthesis and release of [^{14}C]acetylcholine in rat cerebral-cortex slices (Grewaal, D. S. & Quastel, J. H.) 1–14
Progesterone, role of 20α-hydroxypregn-4-en-3-one and, in the control of cholesteryl ester biosynthesis in rabbit ovary interstitial tissue (Flint, A. P. F., Grinwich, D. L. & Armstrong, D. T.) 313–321
Proline, incorporation of, into collagen by slices of experimentally induced rat granulation tissue (Aalto, M., Lampiaho, K., Pikkarainen, J. & Kulonen, E.) 663–671
Promitochondria, changes in the activities of enzymes in, during glucose de-repression and respiratory adaptation of anaerobically grown *Saccharomyces carlsbergensis* (Cartledge, T. G. & Lloyd, D.) 609–621
[1-^{14}C]Propionate, incorporation of [1-^{14}C]acetate, [1-^{14}C]isobutyrate and, into 6-*O*-methylglucose-containing lipopolysaccharides by whole cells of *Mycobacterium phlei* A.T.C.C. 356 *in vivo* (Narumi, K., Keller, J. M. & Ballou, C. E.) 329–340
Prostaglandins E_1 and $F_{2\alpha}$, inhibition by 7-oxa- and 5-oxa-prostaglandin analogues of the biosynthesis of, from arachidonate by an ox seminal-vesicle microsomal preparation (McDonald-Gibson, R. G., Flack, J. D. & Ramwell, P. W.) 117–120
Prostate gland, human, effects of cyproterone and cyproterone acetate on the dynamics of the uptake and metabolism of androgens by, *in vitro* (Giorgi, E. P., Shirley, I. M., Grant, J. K. & Stewart, J. C.) 465–474
Protein, biosynthesis of, in slices of experimentally induced rat granulation tissue (Aalto, M., Lampiaho, K., Pikkarainen, J. & Kulonen, E.) 663–671
Protein, diminished biosynthesis of, in cell-free systems from heart muscle and skeletal muscle from polymyopathic hamsters (Bester, A. J. & Gevers, W.) 193–201
Protein, effects of insulin on the biosynthesis of, by perfused hearts from normal and insulin-deficient rats in the presence of glucose and after depletion of glucose, glucose 6-phosphate and glycogen (Chain, E. B. & Sender, P. M.) 593–601
Protein, effects of putative neurotransmitters, tetrodotoxin and other agents on the turnover of serine phosphate bound to, in respiring slices of guinea-pig cerebral cortex (Reddington, M., Rodnight, R. & Williams, M.) 475–482
Protein, evidence for the presence of defective transfer ribonucleic acid and its inhibitory effect on the biosynthesis of, in skeletal muscle from polymyopathic hamsters (Bester, A. J. & Gevers, W.) 203–214
Protein kinase, stimulation by adenosine 3′:5′-cyclic monophosphate of the intrinsic activity of, in membrane preparations from ox cerebral cortex (Weller, M. & Rodnight, R.) 483–492
Protein, rates of the biosynthesis of, in the Langendorff-perfused rat heart in the presence and in the absence of insulin and in the working perfused rat heart (Sender, P. M. & Garlick, P. J.) 603–608
Protein, retinol-binding, non-participation of, in the plasma transport of retinoate in the rat (Smith, J. E., Milch, P. O., Muto, Y. & Goodman, DeW.S.) 821–827
Protein, studies on the biosynthesis of deoxyribonucleic acid, ribonucleic acid and, in nuclei separated by zonal centrifugation from liver of rats treated with thioacetamide (Gonzalez-Mujica, F. & Mathias, A. P.) 163–183
Protein, turnover of glycoprotein and, in rabbit kidney-cortex brush borders *in vivo* (Quirk, S. J., Byrne, J. & Robinson, G. B.) 501–508
Proteins, membrane, high-molecular-weight, effect of 6-*N*,2′-*O*-dibutyryladenosine 3′:5′-cyclic monophosphate plus testosterone on the phosphorylation of, in cultured Chinese-hamster ovary cells (Rieber, M. & Bacalao, J.) 641–644
Protons, stoicheiometry of the symport of lactose and, across the plasma membrane of *Escherichia coli* (West, I. C. & Mitchell, P.) 587–592
Protons, stoicheiometry of the translocation of, by the nicotinamide–adenine dinucleotide (phosphate) transhydrogenase of rat liver mitochondria (Moyle, J. & Mitchell, P.) 571–585
Protoveratrine, effects of, on the biosynthesis and release of [^{14}C]acetylcholine in rat cerebral-cortex slices (Grewaal, D. S. & Quastel, J. H.) 1–14
Pseudomonas aeruginosa C.G.H. 7709, regulation of the transport of glucose and 2-deoxy-D-glucose in (Mukkada, A. J., Long, G. L., & Romano, A. H.) 155–162
Pseudomonas aeruginosa 2F32, chemostat studies on the regulation by citrate of glucose metabolism in (Ng, F. M.-W. & Dawes, E. A.) 129–140
Pseudomonas aeruginosa 2F32, regulation of the transport of glucose and methyl α-glucoside in (Midgley, M. & Dawes, E. A.) 141–154
Pseudomonas AM1, role of acetate as an intermediate during growth of, on C_1 compounds, ethanol and 3-hydroxybutyrate (Dunstan, P. M. & Anthony, C.) 797–801
Pseudomonas testosteroni, degradation of L-histidine, imidazol-5-yl-L-lactate and imidazol-5-ylpropionate by (Coote, J. G. & Hassall, H.) 409–422
Pseudomonas testosteroni, regulation of the activities of the enzymes degrading histidine, imidazol-5-yl-L-lactate and imidazol-5-ylpropionate in (Coote, J. G. & Hassall, H.) 423–433
Putrescine, control by, of the activity of ornithine decarboxylase in phytohaemagglutinin-stimulated human lymphocytes (Kay, J. E. & Lindsay, V. J.) 791–796
Putrescine, inhibition by methylglyoxal bis(guanylhydrazone) of the biosynthesis of spermidine from, in rat liver and kidney (Pegg, A. E.) 537–540
Pyruvate carboxylase, regulation of pyruvate metabolism via, in rat brain mitochondria (Patel, M. S. & Tilghman, S. M.) 185–192
Pyruvate kinase, effects of calcium ions on the activities of, and other glycolytic enzymes in various vertebrate and invertebrate muscles (Vaughan, H., Thornton, S. D. & Newsholme, E. A.) 527–535

Pyruvate, regulation of the metabolism of, via pyruvate carboxylase in rat brain mitochondria (Patel, M. S. & Tilghman, S. M.) 185–192
Pyruvate, role of, in the regulation of a nicotinamide–adenine dinucleotide phosphate-linked isoenzyme of isocitrate dehydrogenase from *Acinetobacter lwoffi* (Self, C. H., Parker, M. G. & Weitzman, P. D. J.) 215–221

Red blood cells, *see* Erythrocytes
Redox state, effects of the injection of crotonate on, and on gluconeogenesis from lactate in rat liver *in vivo* (Hawkins, R. A., Houghton, C. R. S. & Williamson, D. H.) 19–25
Regeneration, uptake of orotate and thymidine by rat liver during (Ord, M. G. & Stocken, L. A.) 47–54
Respiratory chain, assembly of, during respiratory adaptation of anaerobically grown *Saccharomyces carlsbergensis* (Cartledge, T. G. & Lloyd, D.) 609–621
Reticulum, endoplasmic, central-nervous-system, rat, localization of the enzymes responsible for the biosynthesis of phosphatidate *de novo* in (Possmayer, F., Meiners, B. & Mudd, J. B.) 381–394
Reticulum, endoplasmic, liver, rat, role of membrane phospholipids in the interaction of ribosomes with the membrane of (Jothy, S., Tay, S. & Simpkins, H.) 637–640
Reticulum, endoplasmic, rough, kidney, rat, physicochemical modifications of nascent lysosomal acid hydrolases during transport from, through the Golgi apparatus (Goldstone, A. & Koenig, H.) 267–282
Retinoate, plasma transport and metabolism of, in the rat (Smith, J. E., Milch, P. O., Muto, Y. & Goodman, DeW.S.) 821–827
Retinol-binding protein, non-participation of, in the plasma transport of retinoate in the rat (Smith, J. E., Milch, P. O., Muto, Y. & Goodman, DeW.S.) 821–827
Rhodopseudomonas spheroides N.C.I.B. 8253, inhibitory effect of nicotine on the biosynthesis of spheroidene and hydroxyspheroidene in (Singh, R. K., Ben-Aziz, A., Britton, G. & Goodwin, T. W.) 649–652
Rhodopseudomonas gelatinosa N.C.I.B. 8290, inhibitory effect of nicotine on the biosynthesis of spheroidene and hydroxyspheroidene in (Singh, R. K., Ben-Azia, A., Britton, G. & Goodwin, T. W.) 649–652
Ribonuclease, acid, heterogeneous distribution of, and other acid hydrolases in subgroups of lysosomes from a homogeneous population of cultured Chinese-hamster ovary fibroblasts (Milsom, J. P. & Wynn, C. H.) 493–500
Ribonuclease, alkaline, activities of alkaline phosphodiesterase and, in rat liver plasma membranes (Prospero, T. D., Burge, M. L. E., Norris, K. A., Hinton, R. H. & Reid, E.) 449–458
Ribonucleic acid, biosynthesis of, *in vivo*, in rat brain nuclei subsequently fractionated by zonal centrifugation (Austoker, J., Cox, D. & Mathias, A. P.) 813–819
Ribonucleic acid, inhibition by complement of the concanavalin A-stimulated incorporation of [^{3}H]uridine into, of rat lymphocytes (Milthorpe, P. & Forsdyke, D. R.) 803–812
Ribonucleic acid, studies on the biosynthesis of protein, deoxyribonucleic acid and, in nuclei separated by zonal centrifugation from liver of rats treated with thioacetamide (Gonzalez-Mujica, F. & Mathias, A. P.) 163–183
Ribonucleic acid, transfer, defective, evidence for the presence of, and its inhibitory effect on protein biosynthesis in skeletal muscle from polymyopathic hamsters (Bester, A. J. & Gevers, W.) 203–214
Ribosomes, role of membrane phospholipids in the interaction of, with rat liver endoplasmic-reticulum membrane (Jothy, S., Tay, S. & Simpkins, H.) 637–640
Rickets, hydroxylation of lysine residues of collagen biosynthesized in bone of rats and chicks with (Barnes, M. J., Constable, B. J., Morton, L. F. & Kodicek, E.) 113–115
Rumen, sheep, role of food particles as a site for the hydrogenation of unsaturated fatty acids in (Harfoot, C. G., Noble, R. C. & Moore, J. H.) 829–832

Saccharomyces carlsbergensis N.C.Y.C. 74S, anaerobically grown, changes in the activities and subcellular distribution of enzymes during glucose de-repression and respiratory adaptation of (Cartledge, T. G. & Lloyd, D.) 609–621
Sarcoplasm, muscle, heart, rat, effect of insulin on the rate of biosynthesis of the proteins of (Sender, P. M. & Garlick, P. J.) 603–608
Seminal vesicles, ox, inhibition of 7-oxa- and 5-oxa-prostaglandin analogues of the biosynthesis of prostaglandins E_2 and $F_{2\alpha}$ from arachidonate by a microsomal preparation from (McDonald-Gibson, R. G., Flack, J. D. & Ramwell, P. W.) 117–120
Serine phosphate, protein-bound, effects of putative neurotransmitters, tetrodotoxin and other agents on the turnover of, in respiring slices of guinea-pig cerebral cortex (Reddington, M., Rodnight, R. & Williams, M.) 475–482
Serine, utilization of methylamine for the biosynthesis of, in excised shoot tips of the tea plant (Suzuki, T.) 753–763
Serotonin, *see* 5-Hydroxytryptamine
Serum albumin, *see* Albumin, serum
Serum factors, rat, inhibition by, the concanavalin A-stimulated incorporation of [^{3}H]uridine into ribonucleic acid of rat lymphocytes (Milthorpe, P. & Forsdyke, D. R.) 803–812
Sialic acid, developmental changes in the content of, in foetal mouse plasma glycoproteins (Gustine, D. L. & Zimmerman, E. F.) 541–551
Skeletal muscle, *see* Muscle, skeletal
Skin fibroblasts, human, cultured, disorder in the metabolism of hyaluronate in, from a patient with Hurler's syndrome (Germinario, R. J., Kahlenberg, A. & Pinsky, L.) 403–408
Skin fibroblasts, human, cultured, metabolism of sulphated glycosaminoglycans in, from a patient with Hurler's syndrome (Germinario, R. J., Kahlenberg, A. & Pinsky, L.) 395–402
Small intestine, *see* Intestine, small
Snell 494 adrenocortical tumour, rat, activity of microsomal C_{19} steroid 5α-reductase in (Maynard, P. V. & Cameron, E. H. D.) 293–300

Spermidine, control by, of the activity of ornithine decarboxylase in phytohaemagglutinin-stimulated human lymphocytes (Kay, J. E. & Lindsay, V. J.) 791–796
Spheroidene, inhibitory effect of nicotine on the biosynthesis of hydroxyspheroidene and, in two *Rhodopseudomonas* species (Singh, R. K., Ben-Aziz, A., Britton, G. & Goodwin, T. W.) 649–652
Starvation, degradation of enzymes involved in the metabolism of glucose in rat small intestine during (Jones, G. M. & Mayer, R. J.) 657–661
Steroid (C_{19}) 5α-reductase, microsomal, adrenal-gland, rat, effects of various hormonal treatments on the activity of (Maynard, P. V. & Cameron, E. H. D.) 293–300
Steroid (C_{19}) 5α-reductase, microsomal, adrenal-gland, rat, metabolism of androst-4-ene-3,17-dione by (Maynard, P. V. & Cameron, E. H. D.) 283–291
Steroids, activities of enzymes involved in the biosynthesis of, and cholesteryl ester metabolism in rabbit ovary interstitial tissue and corpora lutea (Flint, A. P. F. & Armstrong, D. T.) 301–311
Steroids, androgenic, effects of cyproterone and cyproterone acetate on the dynamics of the uptake and metabolism of, by human prostate gland *in vitro* (Giorgi, E. P., Shirley, I. M., Grant, J. K. & Stewart, J. C.) 465–474
Steroids, inhibitory effects of, on the formation of glucoside conjugates by a mouse liver microsomal preparation (Gessner, T., Jacknowitz, A. & Vollmer, C. A.) 249–258
Sterols, 4,4-dimethyl, effect of carbon monoxide on the nature of, accumulated during the biosynthesis of cholesterol from mevalonate by a rat liver preparation (Gibbons, G. F. & Mitropoulos, K. A.) 439–448
Sulphadiazine, acetylation of, by *N*-acetyltransferases of various tissues of the rabbit (Hearse, D. J. & Weber, W. W.) 519–526
Sulphamethazine, acetylation of, by *N*-acetyltransferases of various tissues of the rabbit (Hearse, D. J. & Weber, W. W.) 519–526
[^{35}S]Sulphate, incorporation of [^{3}H]glucose and, into sulphated glycosaminoglycans in cultured skin fibroblasts from a human patient with Hurler's syndrome (Germinario, R. J., Kahlenberg, A. & Pinsky, L.) 395–402
Sulphydryl groups, *see* Thiol groups
Supernatant fraction, *see* Cytosol
Synaptosomes, brain, guinea-pig, activities of glyceride lipases in, and their stimulation by noradrenaline, 5-hydroxytryptamine and adrenaline (Vyvoda, O. S. & Rowe, C. E.) 233–248
Synaptosomes, cerebral-cortex, ox, stimulation by adenosine 3′:5′-cyclic monophosphate of the intrinsic protein kinase activity in membrane fragments of (Weller, M. & Rodnight, R.) 483–492

Tea (*Thea sinensis*) plant, metabolism of methylamine in excised shoot tips of (Suzuki, T.) 753–763
Teichoic acids, cell-wall and membrane, function of, in maintaining the correct ionic environment for cation-dependent enzyme systems of the membrane of *Bacillus licheniformis* A.T.C.C. 9945 (Hughes, A. H., Hancock, I. C. & Baddiley, J.) 83–93
Temperature, low, influx of calcium ions into human erythrocytes during storage at (Long, C. & Mouat, B.) 559–570
Testes, rat, concentrations of free amino acids and lactate in (Mushahwar, I. K. & Koeppe, R. E.) 353–359
Testosterone, effect of 6-*N*,2′-*O*-dibutyryladenosine 3′:5′-cyclic monophosphate plus, on the phosphorylation of high-molecular-weight membrane proteins in cultured Chinese-hamster ovary cells (Rieber, M. & Bacalao, J.) 641–644
Testosterone, effects of cyproterone and cyproterone acetate on the dynamics of the uptake and metabolism of, and other androgens by human prostate gland *in vitro* (Giorgi, E. P., Shirley, I. M., Grant, J. K. & Stewart, J. C.) 465–474
Testosterone, effects of treatment with corticotrophin, oestradiol and, on the activity of microsomal C_{19} steroid 5α-reductase in the adrenal glands of intact and castrated rats (Maynard, P. V. & Cameron, E. H. D.) 293–300
Testosterone, metabolism of androst-4-ene-3,17-dione and, by subcellular fractions of rat adrenal gland with particular reference to microsomal C_{19} steroid 5α-reductase (Maynard, P. V. & Cameron, E. H. D.) 283–291
Tetrodotoxin, effects of, and other agents on the turnover of protein-bound serine phosphate in respiring slices of guinea-pig cerebral cortex (Reddington, M., Rodnight, R. & Williams, M.) 475–482
Tetrodotoxin, effects of, on the biosynthesis and release of [^{14}C]acetylcholine in rat cerebral-cortex slices (Grewaal, D. S. & Quastel, J. H.) 1–14
Thea sinensis, *see* Tea
Theobromine, utilization of methylamine for the biosynthesis of, in excised shoot tips of the tea plant (Suzuki, T.) 753–763
Thioacetamide, studies of nuclei separated by zonal centrifugation from liver of rats treated with (Gonzalez-Mujica, F. & Mathias, A. P.) 163–183
Thiol groups, iodoacetamide-induced sensitization of β-cells in isolated mouse pancreas islets of Langerhans to stimulation by glucose as evidence for the involvement of, in the release of insulin (Hellman, B., Idahl, L.-Å., Lernmark, Å., Sehlin, J. & Täljedal, I.-B.) 775–879
Thymidine, uptake of orotate and, by normal and regenerating rat livers (Ord, M. G. & Stocken, L. A.) 47–54
Transfer ribonucleic acid, *see* Ribonucleic acid, transfer
Transferrins, developmental changes in the microheterogeneity of, and other glycoproteins in foetal mouse plasma (Gustine, D. L. & Zimmerman, E. F.) 541–551
Trehalase, effects of calcium ions on the activities of, and other glycolytic enzymes in various vertebrate and invertebrate muscles (Vaughan, H., Thornton, S. D. & Newsholme, E. A.) 527–535
Tricarboxylic acid cycle, chemostat studies on the regulation of the activity of, in *Pseudomonas aeruginosa* 2F32 (Ng, F. M.-W. & Dawes, E. A.) 129–140
Tricarboxylic acid cycle, control of the biosynthesis of phosphoenolpyruvate from intermediates of, in guinea-pig liver mitochondria (Wilson, M. B.) 553–557

Tricarboxylic acid cycle, regulation by intermediates of, of the transport of glucose in *Pseudomonas aeruginosa* C.G.H. 7709 (Mukkada, A. J., Long, G. L. & Romano, A. H.) 155–162
Tricarboxylic acid cycle, role of intermediates of, in the regulation of pyruvate metabolism via pyruvate carboxylase in rat brain mitochondria (Patel, M. S. & Tilghman, S. M.) 185–192
Triglyceride lipase, activities of, and other glyceride lipases in nerve endings of guinea-pig brain and their stimulation by noradrenaline, 5-hydroxytryptamine and (Vyvoda, O. S. & Rowe, C. E.) 233–248
Triglycerides, content of, in lipid droplets isolated from rat liver (DiAugustine, R. P., Schaefer, J.-M. & Fouts, J. R.) 323–327
Trimethylamine, metabolism of, in obligate and facultative methylotrophic bacteria (Colby, J. & Zatman, L. J.) 101–112

Uridine diphosphate glucose, inhibitory effects of steroids on the formation of glucoside conjugates from, by a mouse liver microsomal preparation (Gessner, T., Jacknowitz, A. & Vollmer, C. A.) 249–258
[^{3}H]Uridine, incorporation of [^{14}C]orotate, [^{14}C]adenosine and, into ribonucleic acid *in vivo* in rat brain nuclei subsequently fractionated by zonal centrifugation (Austoker, J., Cox, D. & Mathias, A. P.) 813–819
[^{3}H]Uridine, inhibition by complement of the concanavalin A-stimulated incorporation of, into ribonucleic acid of rat lymphocytes (Milthorpe, P. & Forsdyke, D. R.) 803–812
Urocanase, regulation of the activities of, and other enzymes involved in the pathway for the degradation of L-histidine to L-glutamate in *Pseudomonas testosteroni* (Coote, J. G. & Hassall, H.) 423–433
Urocanate, identification of, as a metabolite in the degradation of L-histidine, imidazol-5-yl-L-lactate and imidazol-5-ylpropionate by *Pseudomonas testosteroni* (Coote, J. G. & Hassall, H.) 409–422

Urtica dioica, *see* Nettle

Vasopressin, [8-lysine]-, subcellular organization of adenosine triphosphatase, neurophysins, oxytocin and, in pig posterior pituitary gland (Pickup, J. C., Johnston, C. I., Nakamura, S., Uttenthal, L. O. & Hope, D. B.) 361–371
Vitamin A, plasma transport and metabolism of retinoate in rats deficient in (Smith, J. E., Milch, P. O., Muto, Y. & Goodman, DeW.S.) 821–827
Vitamin D, hydroxylation of lysine residues of collagen biosynthesized in bone of rats and chicks deficient in (Barnes, M. J., Constable, B. J., Morton, L. F. & Kodicek, E.) 113–115
Vitellogenin, biosynthesis and secretion of, by liver slices from oestrogen-treated *Xenopus laevis* (Merry, A. H., Dolphin, P. J., Munday, K. A. & Akhtar, M.) 459–463

Wall, cell, *see* Cell wall

Xenopus laevis, oestrogen-treated, biosynthesis and secretion of vitellogenin by liver slices from (Merry, A. H., Dolphin, P. J., Munday, K. A. & Akhtar, M.) 459–463

Yeast (*Saccharomyces carlsbergensis* N.C.Y.C. 74S), anaerobically grown, changes in the activities and subcellular distribution of enzymes during glucose derepression and respiratory adaptation of (Cartledge, T. G. & Lloyd, D.) 609–621

Zinc ions, interrelationships in trace-element metabolism in toxicities of, and other metal ions towards a cobalt ion-resistant strain of *Neurospora crassa* (Venkateswerlu, G. & Sivarama Sastry, K.) 673–680